

**Mapping Heaven and Earth:
Field-Allocation Theory and Prophetic Thought in Nineteenth-Century Joseon Maps**

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THESIS ABSTRACT

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Title: Mapping Heaven and Earth: Field-Allocation Theory and Prophetic Thought in
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Two late Joseon maps titled *Map of Heaven and Earth* are designed with a square terrestrial map enclosed within a circular frame of star constellations. Previous scholarship has often interpreted this design as a reflection of the ancient Chinese cosmological concept of “round sky and square earth” (K. *Cheonwon jibang*; Ch. *Tianyuan difang* 天圓地方). However, these interpretations overlook the deeper intent behind incorporating astronomical knowledge—particularly the field-allocation theory—into the maps, and fail to address how their design reflects the historical circumstances of late Joseon Korea. I will argue that these nineteenth-century maps, produced during a period marked by political corruption, natural disasters, and recurrent uprisings that fueled widespread popular superstition, served as a prophetic device that sought to address the prevailing social anxieties. Their incorporation of field-allocation theory operates as a prognostic framework for forecasting political transformation.

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CHAPTER 1: INTRODUCTION

The field-allocation system (K. *bunya*; Ch. *fenye* 分野) is an ancient Chinese astronomical theory that posits a correspondence between terrestrial regions and celestial star constellations, using their correlations to divine the fortune of specific locations based on astronomical changes. According to this theory, the destinies of rulers and states are determined by the positions of constellations and celestial bodies in particular regions of the sky. This theory originated in early ancient China and can be traced back to Zhou dynasty (1046-256 BCE).¹ After its systemization during the Han era (202 BCE-9 CE, 25-220 CE), field-allocation system would become a central component of official astrology throughout most of the history of imperial China.² This astronomical theory was also introduced into ancient Korea and became firmly established during the Joseon dynasty (1392-1910), where it served as a framework for interpreting nation-wide disaster until the nineteenth century.³ Interestingly, this theory appears in two nineteenth-century Joseon maps titled “Map of Heaven and Earth” (K. *Cheonjido*; Ch. *Tianditu* 天地圖), created during the late Joseon dynasty, a period in which the last kingdom of premodern Korea was approaching its collapse. On one hand, this era was marked by profound turmoil, including widespread governmental corruption, natural disasters, foreign conflicts, and domestic rebellions. On the other hand, it was also a period of reform, modernization efforts, and increasing exposure to Western science. Under such circumstances, one might expect contemporary maps to reflect heightened defensive concerns or the adoption of Western

¹ For a detailed discussion of the Chinese field-allocation system, see David W. Pankenier, “Characteristics of Field Allocation (fenye) Astrology in Early China,” in *Current Studies in Archaeoastronomy: Conversations Across Space and Time*, eds. John Fountain and Rolf M. Sinclair (Durham: Carolina Academic Press, 2005), 499-513.

² John B. Henderson, *The Development and Decline of Chinese Cosmology* (New York: Columbia University Press, 1984), 70.

³ For further discussion of the application of field-allocation theory in the Joseon dynasty, see Oh Sang-Hak 吳尚學, “傳統時代 天地에 대한 相關的 思考와 그의 表現— 分野說을 중심으로 [A Correlative Thought on Heaven and Earth and Its Representataion in the Pre-Modern Society: The Theory of Punya].” *문화역사지리 제* [Cultural Historical Geography] 11 (1999): 15, 20.

cartographic practices. Yet, these maps appear indifferent to the cultural conflicts and external invasions of the time, instead maintaining a strong adherence to traditional Chinese knowledge. This raises several important questions: What significance did producing a map grounded in seemingly “outdated” knowledge hold at this historical moment? What purpose did the star constellations serve in the map’s visual and conceptual framework? And what might have been the mapmaker’s underlying intent in designing such an image? This paper examines these questions by analyzing the content, structure, and function of these late Joseon *Cheonjido* maps.

Despite being densely annotated with numerous place names, these two maps have not received significant scholarly attention or in-depth discussion. Most researchers, noting the distinctive design of square frames within a circular frame of star constellations (fig. 1), interpret it as a reflection of the Sino-centric worldview of “round sky, square earth”—where the circular constellations represent the sky, and the square frames depict the earth. While this interpretation is plausible, it presents several problems. First, it oversimplifies the significance of both the constellation frame and the square map. Second, it neglects the internal inconsistencies of the maps and the mapmakers’ intentions. Third, it fails to consider how these maps engage with the broader historical and intellectual context of late Joseon society.

I argue that the incorporation of the field-allocation system in these Joseon maps was not intended merely to illustrate the traditional cosmological notion of “round heaven and square earth.” Rather, it functioned as a prognostic mechanism—a divinatory tool used to anticipate the fate of the declining Joseon court and the uncertain future of the nation. Its integration with apocryphal texts such as the *Diwang shiji* and the *Shanhaijing* not only amplifies the maps’ divinatory and mythical dimensions but also reflects a broader cultural fascination with prognostication that permeated late Joseon intellectual and social life. This study demonstrates

that the nineteenth century in Korea was not solely characterized by the influence of Western cartography and modernization. Instead, emerging scientific knowledge coexisted with longstanding traditions of divination and cosmology that relied on earlier astronomical theories. Although Joseon society was increasingly exposed to Western ideas, traditional cultural frameworks continued to persist, circulate, and shape intellectual production. Recognizing this coexistence challenges prevailing narratives about the dominance of Western science and offers a more nuanced understanding of the nature and function of late Joseon maps.

In this paper, I will examine in depth one of the two nineteenth-century maps titled *Map of Heaven and Earth* and the second one as a term of comparison. In the first map (fig. 1), I examine the discrepancies between the place names and annotations by comparing them with Chinese maps and textual sources, particularly various versions of field-allocation theory found in ancient Chinese texts. I argue that these inconsistencies reveal the Joseon mapmaker's attempt to synthesize information from multiple sources and to deliberately reinterpret or deviate from orthodox textual traditions. I will also analyze the caption in the map and its apocryphal source, demonstrating how the mapmaker's preference for such texts reveals the superstitious inclinations of late Joseon society. In the second map (fig. 2), I explore how this apocryphal text was integrated with *Map of World Under Heaven* (K. *Ch'ŏnhado*; Ch. *Tianxia tu* 天下圖), an unusual map based on the text *The Classic of Mountains and Seas* (*Shanhaijing* 山海經), and how this fusion mediates the traditional and critical views of Joseon intellectuals on the field-allocation theory and further reflects the superstitious tendencies of the period.

CHAPTER 2: HISTORICAL DEVELOPMENT OF JOSEON MAPS

The two nineteenth-century maps examined in this study are closely connected to earlier *Ch'ŏnhado* maps that emerged in the seventeenth century, as well as to Ming and Qing cartographic traditions of the seventeenth and eighteenth centuries. Although *Ch'ŏnhado* maps may show slight influence from Western world maps, they rarely incorporate Western scientific knowledge, despite its introduction into Korea from the eighteenth century onward. Their strong connection to Ming and Qing cartography is rooted in the historical relationship between Korea and China: after the founding of the Joseon dynasty in 1392, Korea maintained a close tributary relationship with Ming China (1368–1644) from 1401 to 1644. Following the Ming collapse and the rise of the Qing dynasty (1644–1912), Joseon submitted to Manchu rule and remained a tributary state until the Qing defeat in the Sino-Japanese War (1894–1895). The limited adoption of Western cartography in these Korean maps may be attributed to Joseon's adherence to Neo-Confucian orthodoxy—systematized by Zhu Xi (1130–1200) during the Southern Song and further developed in the Ming—which was largely incompatible with Western scientific thought.

How should we assess the value of the two nineteenth-century maps? How might we situate them within the long historical development of Joseon cartography? In what ways do they overlap with—or diverge from—established Joseon mapmaking traditions? To address these questions, it is essential to understand the broader trajectory of cartographic production throughout the Joseon dynasty. This chapter therefore outlines that development in three major phases. Before turning to this historical overview, however, I first examine three defining features of Joseon maps in order to establish a foundational understanding of their visual logic and conceptual nature.

Three features of Joseon maps require us to move beyond a strictly modern framework

when assessing their scientific value or the nature of scientific advancement across major phases of Joseon mapmaking. The Korean term *chido*, commonly translated as “map,” literally means “earth chart” or “land picture.” The semantic range of *do* is notably broad: it can refer to any pictorial or diagrammatic representation and is not confined to technical schemes or plots.⁴ This expansive meaning allows *chido* to encompass a wide variety of visual forms, many of which exceed the boundaries of what is conventionally understood as a “map” in modern cartography. The first prominent feature of the Joseon cartographic tradition is its emphasis on human geography through the integration of geographical and cultural knowledge. Following the format of the geographical monograph (K. *chirichi*; Ch. *dilizhi* 地理志), Joseon maps placed equal value on land-survey data and cultural-historical documentation. A representative example is the *Newly Compiled Geographical Monograph of the Eight Provinces* (K. *Sinch'an p'alto chirichi*; Ch. *Xinzhuan badao dilizhi* 新撰八道地理志), commissioned by King Sejong (r. 1418-1450) in 1414. This work not only records distances between islands and the mainland, provincial tax quotas, tribute transport routes, warehouse and archive locations, population and household statistics, but it also includes extensive cultural and historical information. These contents range from the administrative history of each province to descriptions of significant mountains and rivers, regular tribute items and local products, as well as the locations of royal tombs, ancestral temples, and other culturally meaningful sites.⁵

The second prominent feature of Joseon cartography is the persistent presence of geomantic principles underlying mapmaking practices. Geomancy (K. *p'ungsu*; Ch. *fengshui* 風水) is a traditional system for determining auspicious sites for habitation, burial, and other

⁴ Gari Ledyard, “Cartography in Korea,” in *The History of Cartography Volume Two: Cartography in the Traditional East and Southeast Asian Societies*, ed. J. B. Harley and David Woodward (Chicago and London: The University of Chicago Press, 1994), 279.

⁵ Jeon Sang-Woon 全相運, “李朝初期의 地理學과 地圖,” *Ko munhwa* 古文化, vol. 4 (1966): 7.

activities, and it played a crucial role in shaping human—environment relationships and the cultural landscape, including settlements, administrative centers, and tomb complexes.⁶ Throughout the Joseon period, geomantic concepts coexisted with empirical and scientific developments in cartography.⁷ Even as new measuring instruments and surveying techniques were introduced, geomantic considerations were never entirely excluded from state mapping initiatives. As Gari Ledyard notes, although King Sejong sponsored a number of scientific projects, he simultaneously ordered that government records concerning geomantically situated temples and shrines, as well as documents describing the “shapes and forces of mountains and streams” in local regions, be submitted to the Spring and Autumn Hall, the office responsible for geographical surveys.⁸ This suggests that geomantic knowledge was not completely abandoned even within the scientifically oriented projects of the royal court.

The third feature of Joseon mapmaking is its strong connections to painting. As both Gari Ledyard and John Rennie Short observe, professional painters also made maps, and many early maps have a painterly quality, with painting techniques used in representing seas and rivers. Especially at the regional and local scales, the practices of mapmaking and landscape painting were closely intertwined. This overlap produced maps of highly variable quality: some very skilled, others relatively crude.⁹ Such unevenness reflects the fact that many local mapmakers had backgrounds in painting and drawing rather than in formal cartography.

In this context, the term “scientific” must be understood relationally rather than absolutely: it refers to developments internal to the Joseon cartographic tradition, in which empirical measurement coexisted with geomantic principles, human-geographical concerns, and

⁶ Hong-key Yoon, “Geomancy and Social Upheavals in Korea,” *European Journal of Geopolitics*, 2 (2014): 7.

⁷ For further discussion of Korean geomancy in relation to cartography, see Gari Ledyard, 276-279. John Rennie Short, *Korea: A Cartographic History* (Chicago and London: The University of Chicago Press, 2012).

⁸ Ledyard, 279.

⁹ Short, 18.

painterly conventions. For most mapmakers, “scientific” accuracy primarily meant improvements in measurement, proportionality, and spatial coherence, not the complete abandonment of older cosmographic or aesthetic practices. The emergence of new scientific impulses did not displace earlier forms. Instead, different types of maps continued to coexist, each serving distinct purposes. Their value cannot be reduced to binary distinctions such as accurate versus crude or scientific versus superstitious. Rather, Joseon cartography represents a pluralistic visual culture in which multiple mapping traditions operated simultaneously, adapting to diverse social, intellectual, and practical needs.

Building on this understanding of Joseon cartography as a pluralistic and layered visual tradition, this chapter outlines the major shifts in the historical development of maps during the Joseon dynasty and examines how these transformations shaped the cartographic landscape over five centuries. I focus on three broad periods of change: the fifteenth century, the eighteenth through the first half of the nineteenth centuries, and the second half of the nineteenth into the early twentieth centuries.

The first major shift occurred in the fifteenth century, when mapmaking in the early Joseon period began to shift to scientific survey and away from the geomantic traditions inherited from the preceding Koryŏ dynasty (918-1392). During the Koryŏ period, geomancy played a central role in selecting auspicious site for capitals and tombs, and its influence continued in early Joseon. For example, during the reign of Taejo (r. 1392-1398), geomantic compass devices and geographical texts from the late Koryŏ dynasty were used to determine the location of the new dynasty’s capital. Even into the reign of Taejong (r. 1367-1422), geomancy remained influential, as evidenced by the production of “shapes-and-forces” (K. *hyŏngsŏng*; Ch. *xingshi*) maps of Hanyang prepared in anticipation of the capital’s relocation. Yet, the fifteenth

century also witnessed a growing pursuit of empirical accuracy, which marked the beginning of a scientific transition in Joseon cartography. This development manifested in two principal ways. First, world mapmaking began incorporating knowledge derived from Islamic and Arabian cartographic traditions. Second, state-sponsored mapping projects increasingly relied on direct measurement and field observation, supported by the invention of new instruments designed to improve precision.¹⁰

The first aspect of the shift is exemplified by the creation of one of Korea's earliest surviving world maps during the reign of Taejong (r. 1367-1422). In 1402, Kim Sahyŏng (金士衡), Yi Mu (李茂), Yi Hoe (李薈) produced *The Map of Combined Boundaries of the World with Capitals in History* (K. *Honil kangni yŏktae kukto chito*; Ch. *Hunyi jiangli lidai guodu zhi tu* 混一疆理歷代國都之圖). Possibly intended to reinforce the political authority of the new dynasty, this map synthesized two earlier Chinese works—Li Zemin's *Map of the Diffusion of Instruction* (Ch. *Shengjiao guangbei tu* 聲教廣被圖, 1330) and the monk Qingjun's *Map of the Territories of the One World* (Ch. *Lidai diwang hunyi jiangli tu* 歷代帝王混一疆理圖, 1380)— and incorporated new depictions of Korea and Japan to create a more comprehensive world representation. The inclusion of European place-names and extensive maritime regions indicates that Joseon had access to geographic information concerning the wider world. The map's geographic scope and relative accuracy of Joseon far exceeded those of the maps produced in Korea at the time, making it as a remarkable achievement within early Joseon cartography.¹¹

The second aspect of the shift was achieved through the invention and adoption of scientific measuring devices, which marked a critical moment in the history of Korean

¹⁰ For further discussions of the development of early Joseon maps, see Jeon, 1-16. For analysis of world maps produced during the early Joseon period, see Ledyard, 243-249.

¹¹ Jeon, 2-4.

cartography. These developments signaled the beginning of survey-based triangulation methods and a decisive turn toward scientific mapping practices in the Joseon dynasty. This transition was fully achieved during the reigns of Sejong (r. 1418-1450) and Sejo (r. 1455-1468). Under King Sejong's initiative, the *Newly Compiled Geographical Monograph of the Eight Provinces* (K. *Sinch'an P'alto chirich'i*; Ch. *Xinzhuan badao dilizhi* 新撰八道地理志) was compiled by Meng Sach'ŏng (孟思誠), Kwŏn Kūn (權軫), Yun Hoe (尹淮), and Sin Ch'ang (申穡), based on a comprehensive survey of the nation's provinces and districts ordered in 1414.¹² This work is regarded as establishing a scholarly system of human geography and marking a major step in elevating Joseon geography from predominantly geomantic geography to scholarly and scientific geography.¹³ During Sejong's reign, two new measurement instruments were invented for field surveys: *li*-counting drummobile (K. *kiri koch'a*; Ch. *jili guche* 記里鼓車) and a newly designed pace-counting measuring stick (K. *posuch'ŏk*; Ch. *xinzaio bushu chi* 新造步數尺).¹⁴ The drummobile was employed in the test mapping projects of Hamgyŏng, P'yŏngan, and Hwanghae Provinces between 1424 and 1426 led by Chŏng Ch'ŏk (鄭陟, 1390-1475), marking the first scientific achievement in cartography and initiating a new phase of empirically based mapmaking. The pace-counting rod was used in 1431 to measure distances along the main postal routes of the provinces, with markers placed every thirty *li* (approx. 12 km) with a pillar, a stone, or a planted tree. The accumulated data was subsequently incorporated into official maps.¹⁵

Further advancements continued in the reign of Sejo. In 1467, King Sejo invented additional survey instruments, including the sighting balance (K. *kyuhyŏng*; Ch. *kuiheng* 窺衡)

¹² Jeon, 6.

¹³ Jeon, 7.

¹⁴ The drummobile is a type of distance-measuring cart that automatically beat a drum every 10 *li* (approx. 4 km) to indicate distance. The pace-counting measuring stick marks every thirty *li* (approx. 12 km) with a pillar, a stone, or a planted tree. See Jeon Sang-Woon, 8.

¹⁵ Jeon, 8.

and the ground-marking instrument (K. *inji ūi*; Ch. *yindi yi* 印地儀).¹⁶ These devices were employed in mapping the capital and measuring the royal mausoleum complex at Yeongneung (英陵) in 1468, resulting in newly produced maps of Hanyang and the royal tombs of King Sejong and Queen.¹⁷ Collectively, these scientific instruments — including *li*-counting drummobile, pace-counting measuring stick, sighting balance, and ground-marking instrument— greatly enhanced the accuracy of distance measurements during the mid-fifteenth century.¹⁸

The second shift occurred in the eighteenth and the first half of the nineteenth centuries. A defining feature of this period was the official commissioning of copies of maps produced by European Jesuit missionaries. Although Joseon envoys returning from Ming China in the sixteenth and early seventeenth centuries occasionally brought back Chinese translations of Western works on astronomy and geography, as well as copies of Jesuit maps, Western science and cartographic knowledge exerted little influence in Korea at the time. This limited reception was largely due to the Neo-Confucian orthodoxy adopted by the Joseon, which viewed Western science — often transmitted alongside Catholic doctrines — as heterodox. It was not until the eighteenth century during the reign of King Sukjong (r. 1674-1720), that the Joseon court began to show official interest in Jesuit cartography. Under royal order, Schall von Bell's star atlas was copied in 1708, followed by the reproduction of Matteo Ricci's *Complete Map of Ten Thousand Countries of the World* (Ch. *Kunyu wanguo quantu* 坤輿萬國全圖) in 1709 by the Royal Bureau of Astronomy. This unusual attention was motivated in part by urgent calendrical concerns. Discrepancies between the Joseon and Qing calendars had become diplomatically and ritually

¹⁶ The sighting balance consisted of a bronze vessel cast with twenty-four calibrated sections, a central copper pillar, a horizontal beam, and a hollow sighting shaft, allowing surveyors to establish precise levels. The ground-making instrument combined the sighting balance with a pointing plate, functioning as an early form of plane—table surveying equipment. See Jeon Sang-Woon, 9.

¹⁷ Jeon, 9.

¹⁸ Gari Ledyard, 288. Ledyard also raises doubts about the practical effectiveness and continued use of these instruments in later periods, noting that they are not mentioned in subsequent documentary sources. See Gari Ledyard, 344.

problematic, compelling the Joseon government to adopt the Western-based calendrical system *Shixianli* 時憲歷, developed under Schall von Bell.¹⁹ As Lim Jongtae has argued, the copying of the Jesuit maps should therefore be understood as an extension of state patronage of Jesuit astronomy.²⁰

But other factors also shaped this development. King Sukchong himself demonstrated a notable personal interest in Western knowledge, including geography, astronomy, and calendrical science, and actively promoted the possession of this knowledge. Nevertheless, Sukchong's goals were not limited to technical improvement or to the preservation of scientific knowledge for posterity. As Lim Jongtae observes, the king's deeper political intention lay in consolidating Joseon's cultural identity as the sole inheritor of the Ming's Confucian legacy, particularly after the Ming court had been overthrown by Qing Manchus more than four decades earlier.²¹

This implicit resistance to the Qing Manchus must be understood within its historical context. Joseon suffered two Manchu invasions in 1627 and 1636 and subsequently fell under Qing domination as a tributary state. Moreover, Joseon's brother country—Ming China, to which it had professed deep cultural and political loyalty—was overthrown by the Manchus in 1644. This political upheaval was profoundly unsettling for the Joseon elites, who had long regarded the Ming court as the guardian of Confucian orthodoxy, especially after Ming military intervention helped Joseon repel the Japanese invasions of 1592-1598. The collapse of the Ming at the hands of the Manchus intensified anti-Qing sentiment across Joseon society and further strengthened a sense of cultural independence from Qing China. Many Joseon intellectuals

¹⁹ Lim Jongtae, "Representing an Ideal World Order of the Past: The Cultural Function of the Jesuit World Maps in Eighteenth-Century Korean Government," in *Reimagining the Globe and Cultural Exchange: The East Asian Legacies of Matteo Ricci's World Map*, ed. Laura Hostetler (Leiden: Koninklijke Brill NV, 2024), 246-249

²⁰ Lim, 248.

²¹ Lim, 249.

regarded Joseon as the last bastion of Chinese civilization and contempted Qing Manchurians as barbarians. This cultural and ideological stance helps explain why the Joseon court chose to copy only Jesuit maps produced during the Ming period rather than those created under the Qing dynasty, and why these maps were explicitly framed as a noble legacy inherited from the Ming.²² Such sentiments are also reflected in maps produced by Joseon intellectuals that directly drew upon Ming models or reproduced Ming administrative structures. For example, Kim Suhong's *Comprehensive and Synoptic Map of the Ancient and Modern World* (K. *Ch'ŏnha kogŭm taech'ong pyŏllamdo*; Ch. *Tianxia gujin dazong bianlantu* 天下古今大總遍覽圖), made in 1666, closely echoes the Ming map *Complete Map of the Myriad Countries of Heaven and Earth, Accounts and Reminders of Famous People of Antiquity and the Present* (Ch. *Qiankun wanguo quantu gujin renwu shiji* 乾坤萬國全圖古今人物事蹟) by Liang Zhou in 1593.²³

The combination of Western-inspired global geography with traditional East Asian cosmology suggests that the *Ch'ŏnhado* functioned as an intermediary visual form that enabled Joseon viewers to absorb new world-geographical ideas while still operating within the traditional grammar of East Asian geography.²⁴ Although Joseon intellectuals had more access to Western scientific knowledge and cartography during the seventeenth century, many remained deeply skeptical of these materials and merely consider them as heretical and incompatible with Neo Confucian cosmology.²⁵ Western maps likewise exerted little direct influence on indigenous mapmaking practice. Kim Suhong's map, for instance, adheres closely to traditional historical-geographical formats and preserves a Sino-centric worldview. Nevertheless, it would be overly simplistic to conclude that Western cartography had no impact on Joseon conceptions of the

²² Lim, 249.

²³ Ledyard, 267-268.

²⁴ Bae, Joseon gwa Junghwa, 458-483, quoted in Soh Jeanhyoung, 208.

²⁵ Many elites of this time shared their emotional uneasiness on these maps. See J. P. Park, *A New Middle Kingdom: Painting and Cultural Politics in Late Chosŏn Korea (1700-1850)* (Seattle: University of Washington Press, 2018), 15-18.

world. During the seventeenth century, a distinctive map type— *Map of World Under Heaven* (K. *Ch'ŏnhado*; Ch. *Tianxia tu* 天下圖)—emerged and gained wide popularity through the nineteenth century. The authorship, date of first production, and original purpose of these maps remain unclear and controversial. Yet their cosmographic structure—the depiction of circular islands surrounding a central landmass—has been interpreted as evidence of Western influence.²⁶ Some scholars argue that *Ch'ŏnhado* maps first appeared after the circulation of European world maps such as Ricci's *Complete Map of All Countries on Earth* (Ch. *Kunyu wanguo quantu* 坤輿萬國全圖, 1602) and Verbiest's *Complete Map of the Earth* (Ch. *Kunyu quantu* 坤輿全圖, 1674).²⁷ Others, however, propose earlier origins extending back to the fifteenth century.²⁸ Beyond the question of origins, the *Ch'ŏnhado* maps reveal a rich layering of cosmological and mythological elements. They incorporate numerous fictional place names drawn from *The Classic of Mountains and Seas* (Ch. *Shanhanjing* 山海經) and maintain an explicitly Sino-centric worldview by placing China at the center of the inhabited world.

In the eighteenth century, some Joseon intellectuals' hostility toward Qing China started to change, particularly among the envoys who traveled to Beijing and had close contact with European Jesuits at the Qing court—later known as the *School of Northern Learning* (K. *Bukhak*; Ch. *Beixue* 北學)—were impressed by Qing technological advancement and advocated to selectively adopt Qing practices, especially Western science transmitted through European

²⁶ Lim Jongtae, "Matteo Ricci's World Maps in Late Joseon Dynasty," *The Korean Journal for the History of Science* 33-2 (2011): 293.

²⁷ Soh Jeanhyoung, "Utopia and Dystopia: Cheonha do and the Reception of Renaissance Geography in Late Joseon Korea," in *Remapping the World in East Asia: Toward a Global History of the "Ricci Maps,"* ed. Mario Cams and Elke Papelitzky (Honolulu: University of Hawai'i Press, 2024), 208.

²⁸ Jeon, 4.

Jesuits.²⁹ By the late eighteenth century, certain Joseon Confucian scholars openly accommodated *Western Learning* (K. *Seohak*; Ch. *Xixue* 西學).³⁰ However, this intellectual openness did not imply abandonment of traditional cosmology. Rather, Joseon scholars generally used Western knowledge as a tool to interpret and vindicate traditional cosmology.³¹ For example, the influential Practical Learning scholar Yi Ik (李瀼, 1681-1763) employed Western astronomical models to legitimize traditional field-allocation theory, thereby appropriating foreign science in the service of indigenous intellectual traditions.³²

The rise of the Practical Learning Movement also reshaped cartographic production by encouraging a more empirical, utilitarian approach to geography. This shift is exemplified in the work of Chŏng Sanggi (鄭尙驥, 1678-1752), who studied under Yi Ik and was deeply influenced by that scholarly lineage. Committed to nationwide field investigations and pragmatic methodology, Chŏng applied new scientific tools and techniques to Korean mapmaking.³³ In compiling his *Great Map of the Eastern Country* (K. *Tongguk tae chido*; Ch. *Dongguo da ditu* 東國大地圖), he employed “one hundred-li scale-foot” (K. *paengni ch’ŏk*; Ch. *bailichi zhi suoichi* 百里尺之縮尺), a small ruler line that one foot represented 100 *li* (approx. 40 km) on level terrain and 120-130 *li* in mountainous and river areas.³⁴ This innovation enabled Chŏng to minutely depict land and water routes, communication lines, mountain systems, local centers,

²⁹ For discussions about Northern Learning School and Korean envoys’ activities in Qing China, see Kyung Moon Hwang, *A History of Korea: An Episodic Narrative* (Palgrave Macmillan, 2010), 100-104.

³⁰ Kim Seonhee, “Seongho Yi Ik’s New Approach to Zhijue 知覺 and Weifa 未發: Stimulation by Western Learning and the Expansion of Confucianism,” *Religions* 14 (2023): 2.

³¹ Lim Jongtae. “서구 지리학에 대한 동아시아 세계지리 전통의 반응: 17-18 세기 중국과 조선의 경우 [Impact of Western Geography on East Asian Geographical Tradition in the Seventeenth and Eighteenth Centuries China and Korea],” *한국과학사학회지* [*Seoul Journal of Korean Studies*], vol. 26 (2004): 315-344.

³² Lim Jongtae. “The Introduction of Western Science and the Rationalization of Traditional Astrology: Reevaluating Yi Ik’s “On Field-allocation,” *한국과학사학회지* [*Seoul Journal of Korean Studies*], vol. 17 (2004): 45-63.

³³ Kim Kyung Sung 金庚星. “韓國古地圖에 관한 研究 (The Study of the Old Korean Maps),” *지리학논총*, vol. 4 (1977): 20.

³⁴ Kim, 20.

and transformations of administrative divisions. The standardized scale also allowed all provincial maps to be drawn consistently, producing a coherent and proportionally accurate outline of the Korean peninsula. Compared with the eight-province maps made in the fifteenth century for the first time, such as *Complete Conspectus of the Territory of the Eastern Country* (K. *Tongguk yŏji sŭngnam*; Ch. *Dongguo yudi shenglan* 東國輿地勝覽, 1485), which followed the style and format of the Ming geographical work “The Great Ming Administrative Geography” (Ch. *Da Ming yitong zhi* 大明一統志) and retained a highly stylized, folk-art touch, Chŏng’s innovations represented a revolutionary advance in cartographic technique. His maps served as the basis for numerous copies made by both the government and the general public, dominating Korean cartographic practice between the 1750s and the 1860s.³⁵

However, the influence of Western knowledge in Joseon proved short-lived with the prohibition of Catholicism. Both the Western Learning and the Northern Learning movements came under severe criticism from conservative officials who sought to defend the old world order. The Old Doctrine faction (K. *Noron*; Ch. *Laolun* 老論), which controlled the nation in the late eighteenth century, attacked officials who engaged with Western Learning—especially those associated with their political rival, the Southerners (K. *Namin*; Ch. *Nanren* 南人).³⁶ During the same period, the Korean government proscribed Catholicism as heterodoxy and persecute the followers in 1785; by 1801, Catholicism had been completely banned in Joseon. From the 1850s to the 1860s, foreign contact was kept to a minimum as the state adopted an isolationist policy until 1876.

The conservative and resistant attitude toward Western science prior to the 1860s might

³⁵ Ledyard, 313.

³⁶ For further discussion about the conflicts between *Noron* and *Namin* in late Joseon period, see Gregory Henderson, “Chong Tasan: A Study in Korea’s Intellectual History,” *The Journal of Asian Studies* 16, no. 3 (1957): 377-386.

have created space for indigenous mapmaking innovations. In 1834, a new technique was adopted by Kim Chŏngho (金正浩) in his *Map of the Blue Hills* (K. *Ch'ŏnggudo*; Ch. *Qingqiutu* 青邱圖). Kim divided the entire territory into a system of square grids, using vertical and horizontal line guides aligned east-west and north-south. Every square unit, measuring 17.5 x 25 cm, corresponded to 70 *li* (approx. 28 km) east-west and 100 *li* (approx. 40 km) north-south. This applies the map to the scale of 1: 160,000. This technique—using vertical and horizontal lines as line guides—corrected the variable scales in Chŏng Sanggi's maps and substituted the “one hundred-li scale-foot” with a more standardized and consistent method of measurement.³⁷

A third shift occurred in the second half of the nineteenth century and the early twentieth century. In 1861, Kim Chŏngho again created the *Map of the Great East* (K. *Taedong yŏjido*; Ch. *Dadong yuditu* 大東與地圖), a work regarded as the fullest realization of scientific cartography in premodern Korea. Compared with earlier maps, this map presents a markedly more accurate representation of the Korean peninsula—one that is close to a precise modern map. Kim's mapmaking approach also radically breaks with tradition in three aspects.³⁸ First, Kim redesigned the format and devised a new method for indicating scale. Abandoning the conventional album format, he adopted long, folded strips that permitted greater flexibility of display. The map consists of twenty-two strips, each assembled from 20 cm x 30 cm sheets; and each sheet encompassing a territory about 80 *li* (approx. 32 km) wide and 120 *li* (approx. 48 km) high. As shown in the sample rectangle on the first strip, each sheet is subdivided into 96 square grids, each grid representing 10 *li* (approx. 4 km) with the diagonal marked as 14 *li* (approx. 5.6 km). By basing the entire map on this implicit grid system—rendered through the modular

³⁷ Kim, 21.

³⁸ For more extensive discussions of innovations in late Joseon mapmaking projects, see Ledyard, 324-329. Kim, 20-22.

arrangement of folded strips rather than through drawn grid lines—Kim significantly enhanced both legibility and cartographic precision.³⁹ Second, he used a new method to depict mountains, later termed the “mountain-projection method” (Ch. *Shanyue touying tufa* 山岳投影圖法).⁴⁰ Instead of representing mountains as shaded masses, a convention common in earlier maps, Kim abstracted mountain ranges into linear forms, thereby emphasizing their orientation and relationship within the larger topographic system. Third, he standardized a new system of symbols and removed textual notes and econodemographic data.⁴¹ This reduction of textual density further sharpened the map’s visual clarity and facilitated its function as a scientific geographic representation.

Kim Chŏngho’s pursuit of cartographic precision was largely driven by urgent military and defensive concerns due a turbulent decade for Joseon. In 1860, Qing China was invaded by British and French forces, who occupied Beijing and burned the imperial Summer Palace. The subsequent weakening of the Qing dynasty forced it to concede to Western demands on trade and diplomatic practice. This generated widespread anxiety within Joseon society. The atmosphere of crisis deepened in 1866, when Taewŏn’gun (Prince Regent, r. 1864-1873) initiated a severe persecution of Catholic communities. The violence triggered the arrival of imperialism in Korea, as throughout the 1860s and 1870s, French and Americans frequently skirmished with the Joseon. In this context, Kim’s *Taedong yŏjido* can be understood as a direct response to the external conflict and unresting social climate. In the preface to the *Taedong yŏjido*, Kim wrote a long quotation from the classical Chinese military strategist Sunzi, emphasizing deep familiarity with the terrain before the battle takes place.⁴² He further articulated the practical and political aims of

³⁹ Kim, 21-22.

⁴⁰ Kim, 22.

⁴¹ Ledyard, 324.

⁴² Ledyard, 324.

his work: “My map will be used to defeat the enemy and suppress violent mobs when the nation is troubled, and to carry out politics, govern every social affair and enforce economic policies in time of peace.”⁴³ Such statements underscore that Kim’s cartography was conceived not merely as a technical achievement but as an essential instrument for national defense during one of the most precarious moments in Joseon’s history.

Eventually, modern Western cartography began to strongly influence Joseon at the end of the nineteenth and early twentieth centuries.⁴⁴ The transformation was closely tied to the process of Japanese colonial expansion on the Korean peninsula, during which mapping operated not only as a technical tool but also as a mechanism for imposing colonial authority. The shift happened after the Kabo Reforms of 1894-1896 and under the colonialization of Japan from 1905 to 1945. As part of the Kabo Reforms—a pro-Japanese modernization movement—the traditional Chinese-style bureaucratic system, taxation system, and traditional Confucian academies were discarded and replaced with Western equivalents.⁴⁵ Following Japan’s victories in the Sino-Japanese War (1894-1895) and the Russo-Japanese War (1904-1905), Korea became a Japanese protectorate in 1905 and was formally annexed in 1910.⁴⁶ Mapping became one of the forms of Japanese colonial domination. Between 1894 and 1908, Japan conducted hydrological and land surveys across Korea, treating mapping as a form of geographic intelligence gathering aiming to take an inventory of the nation’s land and resources.⁴⁷ New Japanese mapping of Korea exhibited clear features of toponymic colonialism: larger regional features were renamed, new administrative place names were adopted after annexation that added Japanese generic

⁴³ Short, 100.

⁴⁴ Ledyard, 344.

⁴⁵ Young Ick Lew, *Brief History of Korea: A Bird’s-Eye View* (New York: The Korea Society, 2000), 20.

⁴⁶ Short, 118.

⁴⁷ Short, 118.

names, roads and natural features were renamed in Japanese style, etc.⁴⁸

The historical development of Joseon mapmaking underwent three major phases of scientific and methodological transformation: the fifteenth century; the eighteenth century through the first half of the nineteenth century; and the second half of the nineteenth century into the early twentieth century. The first shift in the fifteenth century marked a transition from predominantly geomantic traditions to field-based surveys supported by newly developed scientific instruments. Tools such as the *li*-counting drummobile, the pace-counting measuring stick, the sighting balance, and the ground-marking instrument enabled a new level of empirical precision in cartography. During this period, the world map *Honil kangni yŏktae kukto chito* was also produced, incorporating elements of Islamic cartographic knowledge and signaling an early openness to global geographic traditions. The second major shift occurred in the eighteenth and the first half of the nineteenth centuries, when the Joseon court began to examine and reproduce Western-style maps transmitted through Jesuit intermediaries in Qing China—developments that may have spurred the creation of quasi-cosmological maps such as the *Ch'ŏnhado*. Concurrently, the rise of Practical Learning fostered a greater emphasis on empirical approaches to geography. Cartographers such as Chŏng Sanggi adopted innovative techniques, including the “one-hundred-li scale-foot” used in the *Tongguk tae chido*, while Kim Chŏngho introduced vertical and horizontal line guides to divide the territory into uniform grid systems in creating the *Ch'ŏnggudo*. These innovations collectively contributed to significant improvements in spatial accuracy and methodological consistency. The third shift, spanning the second half of the nineteenth century and the early twentieth century, brought further refinement of cartographic methods in response to mounting military and geopolitical pressures. Kim Chŏngho advanced mapmaking practices by adopting long, folded strips in place of earlier grid systems and by

⁴⁸ Short, 122.

developing the “ mountain-projection method ” in his *Taedong yŏjido*, achieving an unprecedented level of precision in premodern Korean cartography. This period also witnessed the introduction and eventual dominance of modern Western cartographic science in Korea, particularly under Japanese colonial expansion in the early twentieth century. These three phases demonstrate the complex, multilayered evolution of Joseon cartography, in which indigenous traditions, selective adaptation of foreign knowledge, and the pressures of geopolitical change intersected to shape Korea’s mapping practices over five centuries.

Although the three phases outlined above trace a general trajectory of historical development in Joseon cartography—each marked by a distinct transitional moment—the two nineteenth-century maps examined in this study do not align neatly with this evolutionary framework. In contrast to the scientifically oriented maps of Kim Chŏngho, the *Map of Heaven and Earth* diverges from the contemporary pursuit of empirical accuracy and appears strikingly indifferent to the sociopolitical turmoil of its time. These works thus present an alternative facet of late-Joseon mapmaking, one that does not conform to the dominant scientific trend of the period. In Chapter Three, I further investigate why these maps were conceived in this manner and recontextualize them within the intellectual and cultural landscape of the nineteenth century.

CHAPTER 3: MAP OF HEAVEN AND EARTH

“Round Heaven and Square Earth”—Misinterpretation of Joseon Maps

Previous scholars have recognized that the two Joseon maps — featuring a square terrestrial map enclosed within a circular celestial chart—embody the traditional cosmological concept of “round heaven and square earth” (K. *Cheonwon jibang*; Ch. *Tianyuan difang* 天圓地方). Among them, Vera Dorofeeva-Lichtmann offers a notable discussion of this idea.⁴⁹ Her analysis, inspired by Richard J. Smith’s research on Chinese Ming and Qing maps,⁵⁰ reveals the structural parallels between Joseon maps and these Chinese maps, which also use a circle-inscribe-square design to represent Heaven and Earth. For instance, she identifies similarities between the Joseon Map “Map of Heaven and Earth” and some Chinese Ming and Qing maps, such as the “Maps of Positions of Heaven and Earth” (Ch. *Tiandi dingwei zhi tu* 天地定位之圖) from Smith’s study, which sources from the 1712 almanac “Amplified Almanac of Auspicious Images” (Ch. *Xinjuan lifa bianlan xiangji beiyao tongshu daquan* 新鐫曆法便覽象吉備要通書大全) (fig. 3). Dorofeeva-Lichtmann suggests that these Chinese maps likely influenced the design of Joseon maps with star lodges. She also contends that in line with Richard Smith’s interpretation of the Chinese maps as “divination boards or “cosmographs” (Ch. *shipan* 式盤), the Joseon maps with circle-inscribed-square frames should be viewed as cosmographs rather than merely terrestrial maps. Furthermore, noting the formal resemblance of these Chinese maps to early Chinese bronze mirrors used in divination, she concludes that the Joseon Map “Map of

⁴⁹ Vera Dorofeeva-Lichtmann, “‘Inversed Cosmographs’ in Late East Asian Cartography and the Atlas Production Trend,” in *East-West Encounter in the Science of Heaven and Earth (Ten to chi no kagaku—Higashi to nishi no deai 天と地の科学——東と西の出会い)*, ed. Tokimasa Takeda 武田時昌 and Bill M. Mak 麥文彪 (Kyoto: Institute for Research in Humanities, Kyoto University, 2019), 159-162.

⁵⁰ Richard J. Smith, *Chinese Maps: Images of “All Under Heaven”* (New York: Oxford University Press, 1996), 28-41.

Heaven and Earth” functions as a cosmographic map and reflects the widespread diffusion of cosmographic maps in Korea.⁵¹

Dorofeeva-Lichtmann’s opinion is not entirely new. Eleven years earlier, Oh Sang-Hak proposed that Korean circular maps titled “World Under Heaven” (K. *Ch’ŏnhado*; Ch. *Tianxia tu* 天下圖) should be understood as cosmographs.⁵² This assertion is valuable for two reasons: first, it shifted the interpretation of Joseon maps from being strictly terrestrial to cosmographic; second, it suggests that the function of these maps might be related to divination rather than purely geographical or cartographic purposes. However, Dorofeeva-Lichtmann’s hypothesis requires more direct evidence from Joseon maps themselves, rather than relying on Chinese maps, to substantiate her claims. Although early Chinese bronze mirrors may have been used for divination—a notion that itself requires proof—this does not necessarily mean that Joseon maps borrowed this function based solely on the basis of formal similarities. Moreover, if the *Map of Heaven and Earth* can be considered a cosmographic map, it is a rare case and is not commonly seen among *Ch’ŏnhado* maps, making it difficult to conclude that cosmographic maps were widely circulated at that time.

Like Dorofeeva-Lichtmann, Li Jun argues that the round rim and the square, ring-shaped land embody the cosmological concept of “round sky and square earth.” He interprets the circular border enclosing the stellar chart as representing the “round heaven,” basing his argument on an analysis of the field-allocation theory illustrated in the “Map of Heaven and Earth,” particularly through the identification of the earthly branches, Jupiter stations, and feudal states inscribed on the map. Moreover, he suggests that the mulberry tree on the eastern edge and the pine tree on the western edge depicted in the *Ch’ŏnhado* maps, symbolize the locations of

⁵¹ Dorofeeva-Lichtmann, 159-160.

⁵² Oh Sang-Hak, “Circular World Maps of the Joseon Dynasty: Their Characteristics and Worldview,” *Korea Journal* 48, no. 1 (2008): 33.

sunrise/moonrise and sunset/moonset, indicating that the round rim also represents the orbit of the sun and moon.⁵³

Dorofeeva-Lichtmann and Li's interpretations are plausible to a certain extent. In Chinese Ming and Qing maps — which may have served as references for Joseon maps — annotations appear in the upper left and right corners reading, “The earth is square like a chessboard, the sky is round like a domed cover” (*Difang ru qiju, tianyuan ru yigai* 地方如棋局, 天圓如倚蓋). Moreover, as Oh Sang-Hak has noted, a Joseon *Ch'ŏnhado* map bears a margin annotation written in Chinese characters stating “*tianyuan difang*” (“round sky, square earth”).⁵⁴ This lends strong support to their interpretation. Considering that the concept of “round sky, square earth” — a traditional cosmological perspective originating from China — prevailed in Sinocentric East Asia for centuries, and that numerous East Asian celestial maps represented the heavens as circular,⁵⁵ these arguments appear particularly convincing.

However, these scholars seem to conflate the star frame — intended to symbolize the round sky — with the components associated with the field-allocation theory. If the stars were meant solely to represent the celestial sphere, there would be little justification for including additional elements such as the names of earthly branches, Jupiter stations, feudal states, and the extensive annotations on field-allocation theory. This distinction becomes crucial when comparing the Joseon map to Ming and Qing Chinese maps, which depict only the twenty-eight lunar lodges without such terrestrial references. Moreover, the *Ch'ŏnhado* map annotated with “*tianyuan difang*,” as Oh Sang-Hak has discussed, contains neither stellar depictions nor

⁵³ Li Jun 李軍, “Kuawenhua yujing xia chaoxian tianxiatu zhi zhenxing: jianlun gudai ditu yanjiu de fangfalun wenti 跨文化语境下朝鲜《天下圖》之‘真形’——兼論古代地圖研究的方法論問題 [A Study of the “True Form” of Joseon Ch'ŏnhado from Transcultural Perspective and Its Related Methodological Issues on Ancient Map Research],” *Meishu daguan* 美術大觀 12, (2020): 26.

⁵⁴ Oh, 20.

⁵⁵ Oh, 18-19.

references to field-allocation theory. This indicates that the *Ch'ŏnhado* map in question was not created for astronomical purposes and differs fundamentally from the star-framed Joseon maps. Consequently, it provides weak evidence for the claim that the stars in the "Map of Heaven and Earth" were intended to represent a "round sky."

Furthermore, the "round sky, square earth" interpretation is insufficient to address several critical questions. For instance, if the star lodges were intended to represent the heavens, why were only a few Korean maps designed with stellar motifs, rather than all of them? Similarly, if the circular rim itself could symbolize the sky, why did the mapmakers add astral frame to reiterate the same idea? Clearly, the "round sky" theory alone cannot satisfactorily account for the star designs on Joseon maps. To conclude that this design merely reflects the traditional cosmological notion of "round sky, square earth" risks overlooking the deeper significance that the mapmakers sought to express.

The field-allocation theory, in contrast, presents a far more intricate intellectual framework than the general cosmological concept of "round heaven, square earth." Integrating this theory into a map would have required the creator to possess extensive knowledge of traditional astronomy. Because the theory underwent multiple revisions and existed in slightly different forms across various historical periods, the map maker would have needed to make deliberate choices regarding which version to adopt and how to apply it accurately. Moreover, considering that many intellectuals in the late Joseon period had begun to question the validity of this traditional system, it is particularly intriguing that Korean mapmakers continued to invest significant effort in creating maps grounded in this complex and contested worldview.

Discrepancies of Field-Allocation System

At first glance, the “Map of Heaven and Earth,” a Joseon-period map collected in the Seoul Museum of History, exemplifies the mature form of field-allocation theory (fig. 1). The map is enclosed with a circular frame depicting constellations and further bordered by a square frame divided into twelve sections, each labeled with one of the twelve Jupiter stations (*ci*) and twelve *chen* positions. The names of provinces and vassal states are inscribed within rectangular and circular cartouches. Moreover, a lengthy caption positioned at the top of the map elaborates on the principles of field-allocation theory, excerpted from “Genealogical Records of Emperors and Kings” (*Diwang shiji* 帝王世紀, hereafter abbreviated as DWSJ) by Huang Fumi (皇甫謐, 215-282 CE).⁵⁶ The caption appears to serve as an explanatory note that contextualizes the theoretical foundation of the map.

However, upon closer examination, it becomes evident that the caption quoted from DWSJ does not correspond to the details represented in the map, suggesting that it was not intended as a textual guide to read the map. For example, the names of provinces marked in the map are absent from the caption. Similarly, the Zheng State, identified on the map as a vassal state, is not mentioned in the caption. Moreover, the names of the twelve Jupiter stations and twelve *chen* (represented by the names of Earthly Branches), along with their correlations to the lunar mansions, appear within the square and circular frames of the map but are omitted from the caption. Conversely, the degree ranges of the lunar mansions mentioned in the caption, such as “from Dipper 11° to Maid 7°,” are not depicted in the map. These inconsistencies indicate that the caption was not meant to function as a precise guide for understanding the map.

⁵⁶ Huang Fumi 皇甫謐, “Xingye ji lidai kentian hukou shu dijiu 星野及歷代畧田戶口數第九,” in *Diwang shiji jicun* 帝王世紀輯存, ed. Xu Zongyuan 徐宗元 (Beijing: Zhonghuashuju, 1964), 117-118. Further discussions about this book, see Monique Nagel-Angermann, “Diwang shiji 帝王世紀,” in *Early Medieval Chinese Texts: A Bibliographical Guide*, ed. Cynthia L. Chennault, Keith N. Knapp, Alan J. Berkowitz and Albert E. Dien (Berkeley: Institute of East Asian Studies, 1995), 62-66; Monique Nagel-Angermann, “Das Diwang shiji des Huangfu Mi (215-282)” (PhD diss, Westfälischen Wilhelms-Universität, 1999), 173-181.

Moreover, the caption is not a faithful quotation from DWSJ but rather an abridged adaptation. It remains only the degree spans of lunar mansions and the corresponding positions of the "Ladle Pointer" (*doujian* 斗建) mentioned in the original text—elements that, notably, are not represented in the map itself. Other details, such as the Jupiter stations, the twelve *chen*, the opposition Jupiter, and the corresponding musical tones, are entirely omitted. The exclusion of the Jupiter stations and twelve *chen* may be attributed to their visual representation in the map, whereas the omission of the remaining elements remains unexplained.

If the caption from DWSJ does not correspond well to the details depicted in the map, it becomes necessary to consider whether other versions of the Chinese field-allocation system might better align with it. Since the author of the map does not specify which version was adopted, a comparative analysis is required to identify the most plausible source. At least five slightly different versions of field-allocation theory appear in ancient Chinese texts: Master Lü's Spring and Autumn Annals (*Lüshichunqiu* 吕氏春秋, 241-238 BCE), Master of Huainan (*Huainanzi* 淮南子, 206 BCE-220 CE), Records of the Grand Historian (*Shiji* 史記, 2nd century BCE-1st century CE), Book of Jin (*Jinshu* 晉書, 648 CE), and The Kaiyuan Reign Period Classic on Astrology (*Kaiyuan zhanjing* 開元占經, 713-742 CE). To identify the possible textual source underlying Joseon Map's field-allocation theory, I will compare the map with these texts in two aspects: first, the toponyms, including the names of provinces and vassal states; and second, the correlations between the twelve Jupiter stations and the twenty-eight star lodges.

Upon comparison, the toponyms in the Joseon map do not correspond precisely to those found in Chinese field-allocation theories (see Appendix IV). Two groups of place names—provinces and vassal states—are inscribed on the Joseon map to indicate their corresponding celestial relations (fig. 4). The seven provinces identified on the map are Yanzhou (兗州),

Yuzhou (豫州), Qingzhou (青州), Xuzhou (徐州), Jizhou (冀州), Yongzhou (雍州), and Jingzhou (荊州) (marked by yellow squares). The fourteen vassal states include Wu (吳), Yue (越), Qi (齊), Wei (衛), Lu (魯), Zhao (趙), Wei (魏), Qin (秦), Zhou (周), Chu (楚), Han (韓), Song (宋), Yan (燕), Zheng (鄭) (marked by white circles). The marked provinces partially correspond to “nine provinces” mentioned in the *Lüshi Chunqiu*, although Yangzhou and Youzhou are missing. They also show partial consistency with *Jinshu* and *Shiji*, yet Youzhou, Yangzhou, Bingzhou, Yizhou, and Sanhe are absent. The vassal states largely align with those mentioned in *Huainanzi*, *Jinshu* and *Kaiyuan zhanjing*, except for the State of Han, which does not appear in either text. In sum, the field-allocation theory represented in the Joseon map does not strictly adhere to any single Chinese version, though it shares partial overlaps with several. This suggests that mapmaker drew selectively from multiple Chinese field-allocation systems, modifying and synthesizing elements from diverse sources to construct a distinct interpretation.

The correspondence between the twelve Jupiter stations and the twenty-eight star lodges does not fully conform to any extant Chinese texts. Although this relationship is not described in the caption, it can only be inferred from the arrangement of the star lodges drawn near the names of Jupiter stations (see Table 1). The pattern of correspondence most closely resembles the version recorded in *Huainanzi*, though notably discrepancies remain (see Table 4). For example, in the Joseon map, the Jupiter Station named “*Xingji*” corresponds to the star lodges named “Dipper and Cowherd,” whereas in *Huainanzi*, it is associated with “Dipper, Cowherd and Maid.” A total of six inconsistencies can be identified through this comparison.

Not only does the field-allocation system in the Joseon map diverge from those found in Chinese texts, but the sequence of star lodges and the orientation of cardinal directions also differ from Chinese cartographic conventions. When compared with Ming and Qing Chinese maps (fig.

3), the order of the star-lodges in the Joseon map is reversed; that is, while the Chinese maps arrange the constellations in a clockwise order, the Joseon map presents them counterclockwise. Moreover, the cardinal orientations are reverted. In Chinese maps, the star lodges “Well, Ghost, Willow, Star, Net, Wings, and Chariot” signify the southern sector, whereas on the Joseon map, they are erroneously placed at the top, corresponding to the north. Conversely, the star lodges “Wall, Encampment, Rooftop, Wilderness, Maid, Cowherd, and Dipper,” which traditionally denote the northern sector, are incorrectly positioned at the bottom, corresponding to the south. The inversion of north and south contradicts the orientation of the embedded square map—where north is placed at the top and south at the bottom—resulting in a paradoxical and disorienting spatial logic.⁵⁷ These fundamental inconsistencies demonstrate that, although the Joseon superficially resembles its Chinese counterparts, it does not accurately visualize the field-allocation theory.

These discrepancies suggest that the map maker was likely not a highly educated intellectual. Although he possessed a basic understanding of traditional astronomy, he appears to have lacked a precise grasp of the field-allocation system. Additional evidence supports this inference. Several place names on the map are incorrectly written. For example, in the upper-left corner of the square map, the place name *Yilibali* 亦力把力 (present-day Beshbalisk) was mistakenly written as *Chidaobadao* 赤刀把刀, while *Suzhou* 肅州 was incorrectly labeled as *Weizhou* 胃州 (fig. 5). These errors indicate that the author was unfamiliar with certain place names and likely copied with misunderstanding. As Lim Jong-Tae has noted, the mapmaker was probably a petty intellectual⁵⁸—perhaps a fallen *yangban* or a member of the village literati—

⁵⁷ Oh Sang-hak also notes the misalignment of the north and south orientations in the *Map of Heaven and Earth*. See Oh Sang-hak, “傳統時代 天地에 대한 相關的 思考와 그의 表現—分野說을 중심으로,” 21.

⁵⁸ Lim Jong-Tae, email message to author, August 1, 2024.

who had lost status within the elite bureaucracy amid social change. Individuals of this kind, often well-versed in divinatory literature, sought to relate dynastic and social change with cosmological principles, drawing upon their knowledge of geomancy and traditional cosmology.

If the map was indeed created by a petty intellectual, its inconsistencies raise questions about the mapmaker's primary intention—whether it was to provide an accurate visualization of the field allocation system, or rather to purposefully depart from orthodox traditions and established precedents. The evidence suggests that the author intentionally eschewed conformity with canonical texts, standard maps, and orthodox stellar diagrams. This deliberate departure is most clearly reflected in the caption above the map. The *Diwang shiji*, from which the caption is excerpted, incorporates numerous apocryphal materials (K. *Toch'am*; Ch. *tuchen* 圖讖 or K. *Ch'amwi*; Ch. *Chenwei* 讖緯) associated with ancient mythology and divination. Due to its heterodox nature, DWSJ was already criticized by some Chinese scholars as early as the seventh century. However, during the eighteenth and nineteenth centuries, Qing scholars sought to reconstruct the text and reassess its historical value.⁵⁹ Notably, this revival of scholarly interest in DWSJ coincides with the period in which the Joseon Map of Heaven and Earth was produced.

Whether the Joseon mapmaker's preference for this apocryphal text was influenced by Qing scholarship remains uncertain. Nevertheless, the scribe's repeated emphasis on the *Diwang shiji* is evident. Each citation begins with the phrase "*Shiji* says" (世紀曰). This is quite unusual. Typically, authors do not identify their sources when annotating field-allocation theory. For instance, Wei Baekgyu's (魏伯珪, 1727-1789) "Record of the World: Newly Edited and Titled Collection of Diagrams" (K. *Hwanyongji*; Ch. *Huanyingzhi* 新編標題纂圖寰瀛誌), which includes an astronomical chart published in 1822, provides no citation of sources. Similarly, the

⁵⁹ Nagel-Angermann, "Diwang shiji 帝王世紀," 63-65.

“Old Sky Chart Showing Rank and Distribution of Stars” (K. *Kujang ch’önsang yölch’a punya chido*; Ch. *Jiucang tianxiang lieci fenye zhitu* 舊藏天象列次分野之圖)—a field-allocation star diagram created in 1777 (possibly made in the Joseon court)—also omits source attribution (fig. 6). By explicitly mentioning *Diwang shiji*, the scribe not only consciously underscores its authority but also implicitly reminds readers not to conflate it with other versions of field-allocation theory. In this sense, the DWSJ quotation reflects a distinct intellectual preference for apocryphal texts.

Popularity of Apocryphal Texts and Superstitious Knowledge

The mapmaker’s preference for apocryphal texts reflects the broader circulation and popularity of such materials in the nineteenth century.⁶⁰ As Lim Jong-Tae has suggested, the selection of *Diwang shiji* over other canonical sources may be attributed to its heterodox and apocryphal nature.⁶¹ During the late Joseon period, apocryphal texts — encompassing superstitious knowledge such as prognostication, divination, and geomancy — circulated clandestinely. These texts were especially popular among diviners and geomancers, some of whom later emerged as rebellious leaders. They employed such writings to foretell the downfall of the Joseon dynasty and the advent of a sage who would restore order and moral governance. A prominent example is “Chong’s Prophecies” (K. *Chöng Kam nok*; Ch. *Zhengjianlu* 鄭鑒錄), a compendium of prognostications attributed to marginalized intellectuals, which was frequently invoked in various nineteenth-century rebellions.

The widespread superstitious beliefs in late Joseon were closely intertwined with the turbulent social and political environment of that era. Around 1800, a deepening political crisis

⁶⁰ Lim, email message to author, August 1, 2024.

⁶¹ Lim, email message to author, August 1, 2024.

emerged as the clans of the queens seized power, reducing young kings to mere puppets. Simultaneously, severe droughts and floods brought about famines and epidemics, leading to economic and demographic decline.⁶² Government corruption, combined with these natural disasters, fueled growing public resentment. This discontent intensified when King Gojong (高宗, r. 1863-1907) adopted an open-door policy in the early 1880s that welcomed Western influences. The policy provoked fierce opposition from conservative factions and the general populace, leading to a series of uprisings that eventually culminated in the Sino-Japanese War of 1894-1895. Following Japan's victory over the Qing dynasty and its subsequent dominance in Korea, government officials — supported by Japan — embarked on sweeping reforms and modernization efforts. The traditional Chinese-style bureaucratic system and Confucian academies were dismantled and replaced by new educational institutions modeled on Western and Japanese prototypes.⁶³

In this context, this Joseon Map was likely produced before the Sino-Japanese War. Its creation coincided with a period of intense turmoil and external threat, when widespread social unrest prompted renewed interest in apocryphal texts that offered theoretical foundations for apocalyptic thought—particularly as the Korean peninsula witnessed numerous uprisings around 1800.⁶⁴ This climate of instability fostered a collective impulse to foresee an uncertain future through divination. Accordingly, the Joseon map was not designed for conventional cartographic purposes; instead, it was imbued with a prophetic function that sought to address the prevailing social anxieties of the time. Its incorporation of the field-allocation theory, quoted from the *Diwang shiji*, which posits a close correspondence between heaven and earth as a means of

⁶² Michael D. Shin, Lee Injae, Owen Miller, Park Jinhoon, Yi Hyun-Hae, *Korean History in Maps: From Prehistory to the Twenty-first Century* (Cambridge: Cambridge University Press, 2014), 93.

⁶³ Lew, 20.

⁶⁴ About major social upheavals in Korean history, see Hong-Key Yoon, “Geomancy and Social Upheavals in Korea,” *European Journal of Geopolitics* 2 (2014): 5-23.

forecasting political transformation, served precisely this prognostic purpose.

This prophetic mood is further evidenced by additional, though sometimes subtle, clues. In the second “Map of Heaven and Earth” (fig. 2), which likewise incorporates the field-allocation theory from the DWSJ, a note inscribed at the lower right margin reads: “Danqiu burns once every thousand years, the Yellow River clears once every thousand years, a portent of the sage's birth.” (*Danqiu qiannian yishao, huanghe qiannian yiqing, shengren chushi zhizhao* 丹丘千年一燒，黃河千年一清，聖人出世之兆). (fig. 7) This rare inscription resonates with the messianic words found in the influential apocryphal text *Chǒng Kam Nok*. For instance, a manifesto issued during the Hong Kyǒngnae Rebellion (1811-1812) foretells the birth of a holy man destined to save the world in a specific region.⁶⁵ The *Chǒng Kam Nok* frequently refers to this savior as the “True Man” (Ch. *Zhen ren* 真人), reflecting a deep-rooted belief in a messianic figure who would bring deliverance.

It is also noteworthy that the same atlas also includes another map titled “Ox-belly Cave” (K. *Ubokto*; Ch. *niufudong* 牛腹洞) (fig. 8), a composition closely associated with geomantic practices. As Lim Jong-Tae observes, “Ox-belly Cave” is one of the “ten auspicious places (Ch. *shishengdi* 十勝地)” identified by geomancers as refuges from warfare, famines, and other calamities⁶⁶ This theme aligns strongly with the *Chǒng Kam Nok* tradition prevalent in the late Joseon period. By including this map alongside those of the eight provinces of Joseon, the atlas articulates a longing for a utopian refuge achievable through geomantic knowledge. Collectively, these features underscore the pervasive atmosphere of superstition and eschatological expectation in late Joseon society.

⁶⁵ John Jorgensen, *The Foresight of Dark Knowing: Chǒng Kam Nok and Insurrectionary Prognostication in Pre-Modern Korea* (Honolulu: University of Hawai'i Press, 2018), 170.

⁶⁶ Lim, email message to author, August 12, 2024.

However, it is worth considering why the mapmaker chose to incorporate the field-allocation system at a time when this traditional cosmological framework was increasingly questioned and criticized under the influence of Western science. From the seventeenth century onward, Western scientific thought was introduced to Joseon through the transmission of European knowledge by missionaries in China.⁶⁷ These missionaries denounced the field-allocation theory as “superstitious,” and their critiques found resonances among certain Joseon scholars who likewise began to question its validity.⁶⁸ For example, Giulio Aleni (1582-1649), an Italian Jesuit missionary active in China, criticized the field-allocation theory. Likewise, Joseon scholars like Yi Ik (李瀼, 1682-1764), Yi Gahwan (李家煥, 1742-1801), Yi Gyugyeong (李圭景, 1788-1860), and Jeong Dongyu (鄭東愈, 1744-1808) expressed skepticism toward this traditional system. Yi Ik, a *Silhak* (practical learning) philosopher and social critic, argued that the field-allocation system amounted to nothing more than arbitrary generalizations based on coincidental correspondences between celestial phenomena and terrestrial events. Jeong Dongyu, a scholar of practical science influenced by Western cosmology, contended that the field-allocation system should not be monopolized by China: “since China, Korea, and Japan are all small parts of the earth, Korea and Japan, as well as China, could correspond to the whole heavens.”⁶⁹

Given this intellectual and cultural background, it is worth asking why maps grounded in traditional astronomical knowledge continued to be produced. This question can be addressed through three factors. First, although Western science had been introduced to Joseon two centuries earlier, its knowledge remained limited to the royal court and elite circles. Books

⁶⁷ For the history of Western influence on Joseon cartography, see Ledyard, 249-254.

⁶⁸ Lim Jong-Tae, “The Introduction of Western Science and the Rationalization of Traditional Astrology: Reevaluating Yi Ik’s ‘On Field-allocation’,” *Seoul Journal of Korean Studies* 17, (2004): 48-49, 53.

⁶⁹ For further discussion of Joseon scholars’ skepticism toward field-allocation theory, see Oh Sang-hak, “傳統時代 天地에 대한 相關의 思考와 그의 表現—分野說을 중심으로,” 23.

influenced by Western thought were kept primarily within the royal collection and were inaccessible to the general public. During the late eighteenth century and early nineteenth century, due to strict government control and a tense political atmosphere, studying Western knowledge was illicit, and foreign contacts had to be conducted in the greatest secrecy.⁷⁰ This climate severely restricted the circulation of Western science. Second, while a small number of Joseon scholars, influenced by European missionaries and Chinese Qing scholars, adopted a critical stance toward field-allocation theory, they constituted only a small portion of society. The deeply entrenched superstitious beliefs of the populace were not easily swayed. Third, even among intellectuals who had access to Western knowledge, some sought to reconcile rather than replace traditional cosmological systems. For example, Yi Ik applied Western astronomical models to interpret how heavenly omens exert influence over earthly affairs.⁷¹ Such examples demonstrate that despite being labeled “superstitious,” traditional astrological theories remained deeply rooted in the minds of Joseon intellectuals. More importantly, this suggests that Western science was not necessarily perceived as antithetical to conventional astrology; instead, it was often appropriated as a supplementary framework to rationalize and reinforce existing cosmological beliefs.

From this perspective, the second Joseon map (fig. 2) negotiates between traditional and critical views of the field-allocation system. On one hand, due to spatial constraints, only six names of provinces are inscribed on the map (highlighted in red boxes), focusing primarily on regions within China, which is depicted as the central continent (fig. 9). This suggests that the mapmaker preserved a Sino-centric worldview, considering China as the sole legitimate

⁷⁰ Gregory Henderson, “Chong Ta-san: A Study in Korea’s Intellectual History,” *The Journal of Asian Studies* 16, no. 3 (1957): 380-382.

⁷¹ Lim Jongtae, “The Introduction of Western Science and the Rationalization of Traditional Astrology,” 61-62.

terrestrial counterpart to heaven (*tianxia* 天下).⁷² On the other hand, the inclusion of star lodges, Jupiter stations, and earthly branches frames a world that merges legendary places from *Shanhaijing* with real countries such as China, Japan, Korea, Ryukyu. By integrating the traditional field-allocation theory into the map, the mapmaker sought to situate the mythical lands, historical states, and actual countries within a unified cosmological framework that correlates heaven and earth, rather than confining this relationship to Chinese territory alone. This approach resonates, to some extent, with the critical view of the intellectual Jeong Dongyu, who argued that “since China, Korea, and Japan are all small parts of the earth, Korea and Japan, as well as China, could correspond to the whole heavens.”

Moreover, the superstitious tone of the second Joseon Map is further heightened through the incorporation of mythical place names drawn from the text *Shanhaijing*, such as the Country of Women (*Nǚren guo* 女人國), Country of Winged People (*Yumin guo* 羽民國) and the Country of One-eyed People (*Yimu guo* 一目國). By referencing this ancient Chinese geographical text compiled between the fifth and third centuries BCE, the mapmaker imbued the map with a heterodox and fantastical dimension. As Oh Sang-Hak notes, the *Shanhaijing*, which enjoyed wide popularity in late Joseon, was regarded as heretical by Confucian scholars.⁷³ In this context, the *Shanhaijing* functioned not only as a means of appealing to popular belief—since many people in late Joseon accepted the world it described as real—but also as a vehicle for reinforcing the era’s superstitious cultural tendencies. When combined with the field-allocation theory derived from the apocryphal text *Diwang shiji*, the map’s superstitious character reaches its culmination.

⁷² This view was rooted in the belief that China was the sole place where Heaven revealed its ordinances to Confucian sages, who then established civilization based on the heavenly principles. See Lim Jongtae, “The Introduction of Western Science and the Rationalization of Traditional Astrology,” 48.

⁷³ Oh Sang-Hak, “Circular World Maps of the Joseon Dynasty: Their Characteristics and Worldview,” *Korea Journal* 48, no. 1 (2008): 26-27.

CHAPTER 4: CONCLUSION

The depiction of star constellations within the circular frame of the Joseon Map serves a purpose beyond simply representing the “round heaven.” Instead, it visually articulates the field-allocation theory, as indicated by accompanying elements such as the names of Jupiter stations, earthly branches, vassal states, and provinces. However, inconsistencies and deviations in the first Joseon Map, when compared with Chinese field-allocation theories, suggest that the mapmaker did not intend to reproduce an accurate version of the system. Instead, the deliberate departures from canonical texts, standard cartographic conventions, and traditional star diagrams indicate a conscious reinterpretation.

This intention is further evidenced by the inclusion of a caption excerpted from the Chinese apocryphal text *Diwang shiji* (帝王世紀). The mapmaker’s reliance on apocryphal sources corresponds to a broader late Joseon cultural inclination toward superstitious practices—such as divination, prognostication, geomancy, and numerology. During this period, apocryphal texts circulated widely among lower-ranking literati and the general populace, serving both as frameworks for interpreting the nation’s uncertain future and as theoretical justifications for rebellion. Pervasive governmental corruption, natural disasters, and foreign threats intensified collective anxieties and fostered a yearning for spiritual consolation. The combination of an excerpt from *Diwang shiji* and place names from the heterodox *Shanhaijing* further amplifies the superstitious tenor of the Joseon maps. Moreover, the geomantic diagram “Ox-belly Cave”, included in the same atlas, reflects the contemporary yearning for a utopian refuge—an Arcadia offering escape from social upheaval and turmoil.

Considering the critical views of high Joseon intellectuals influenced by European missionaries and Chinese scholars, the first Joseon Map may be regarded as a conservative

example that diverges from these critical views. It demonstrates that the influence of elite intellectual discourse was limited in challenging deeply rooted superstitious beliefs. In contrast, the second Joseon Map adopts a more imaginative approach, reflecting an attempt to mediate between traditional and critical views by integrating field allocation into the *Ch'ŏnhado* map. The mapmaker extends the field-allocation system beyond the confines of China, extending the correspondence between Heaven and Earth to encompass Japan, Korea, and Ryukyu, as well as historical regions and mythical lands drawn from the *Shanhaijing*. In doing so, the mapmaker simultaneously engages with critical views shaped by Western scientific influences while satisfying the continuing popular desire for cosmological and superstitious explanations of the world.

This analysis provides a new perspective on the role of field-allocation theory in Joseon maps and invites a reconsideration of the map's function beyond its conventional cartographic purpose. It also challenges the prevailing assumption that Western science exerted a dominant influence on Korean worldviews and cartographic practices in the nineteenth century.

It is necessary to investigate further how the field-allocation system was employed for divinatory purposes by petty intellectuals in everyday social life. Such an inquiry would allow for a re-evaluation of the significance of incorporating the *Shanhaijing* in other Joseon maps that do not feature the field-allocation system, particularly if the text similarly served prognostic functions. It would also be important to examine how the meaning and role of this text transformed within the turbulent sociopolitical environment of the late Joseon period, as well as the ways in which its function interacted with or complemented the maps of the eight provinces included in the same album. Furthermore, other elements commonly found in Joseon maps—such as the geomantic *bagua* (Eight Trigrams) framework and *Yijing* symbols—merit closer

consideration. These features may likewise have fulfilled distinct divinatory or prognostic roles, thereby enriching our understanding of Joseon cartographic traditions.

APPENDIX

Full Translation of the Caption in the *Map of Heaven and Earth*

“世紀曰：自斗十一度至婺女七度，斗建在子吳越分野。

自婺女八度至危十六度，斗建在丑齊分野。

自危十七度至奎四度，斗建在寅衛分野。

自奎五度至胃六度，斗建在卯魯分野。

自胃七度至畢十一度，斗建在辰趙分野。

自畢十二度至東井十五度，斗建在巳晉魏分野。

自井十六度至柳八度，斗建在午秦分野。

自柳九度至張十七度，斗建在未周分野。

自張十八度至軫十一度，斗建在申楚分野。

自軫十二度至氐四度，斗建在酉韓分野。

自氐五度至尾九度，斗建在戌宋分野。

自尾十度至斗七度，斗建在亥燕分野。

凡天有十二次日月之今躔也，地有十二分王侯所國也，故二十八宿合百八十一星，東方青龍三十二星七十五度，北方玄武三十五星九十八度，西方白虎五十一星八十度，南方朱雀六十四星一百十二度。”

Shi Ji (*Diwang shiji*) says:

When the handle of the Big Dipper is between eleven degrees of the lunar mansion Dipper and seven degrees of the lunar mansion Wunü (girl), the star it points to will locate at Wu-

Yue State.

When the handle of the Big Dipper is between the eight degrees of the lunar mansion Wunü (girl) and sixteen degrees of the lunar mansion Wei (Rooftop), the star it points to will locate at Qi State.

When the handle of the Big Dipper is between the seventeen degrees of the lunar mansion Wei (Rooftop) and four degrees of the lunar mansion Kui (Stride), the star it points to will locate at Wei State.

When the handle of the Big Dipper is between the five degrees of Kui (Stride) and six degrees of the lunar mansion Wei (Stomach), the star it points to will locate at Lu State.

When the handle of the Big Dipper is between the seven degrees of Wei (Stomach) and eleven degrees of the lunar mansion Bi (Net), the star it points to will locate at Zhao State.

When the handle of the Big Dipper is between the twelve degrees of Bi (Net) and fifteen degrees of the lunar mansion Jing (Well), the star it points to will locate at Jin and Wei States.

When the handle of the Big Dipper is between the sixteen degrees of Jing (Well) and eight degrees of the lunar mansion Liu (Willow), the star it points to will locate at Qin State.

When the handle of the Big Dipper is between the nine degrees of Liu (Willow) and seventeen degrees of the lunar mansion Zhang (Spread), the star it points to will locate at Zhou State.

When the handle of the Big Dipper is between the eighteen degrees of Zhang (Spread) and eleven degrees of the lunar mansion Zhen (Chariot), the star it points to will locate at Chu State.

When the handle of the Big Dipper is between the twelve degrees of Zhen (Chariot) and

four degrees of the lunar mansion Di (Base), the star it points to will locate at Han State.

When the handle of the Big Dipper is between the five degrees of Di (Base) and nine degrees of the lunar mansion Wei (Tail), the star it points to will locate at Song State.

When the handle of the Big Dipper is between the ten degrees of Wei (Tail) and seven degrees of the lunar mansion Dou (Dipper), the star it points to will locate at Yan State.

The sun and the moon moves along the ecliptic for twelve times in the sky, while on earth, there are twelve feudal states on the earth. The twenty-eight lunar mansions contain eighty-one stars in total: thirty-two stars span seventy-five degrees in the East, forming a shape resembling an Azure Dragon; thirty-five stars span ninety-eight degrees in the North, forming a shape resembling a Black Tortoise; fifty-one stars span eighty degrees in the west, forming a shape resembling a White Tiger; and sixty-four stars span one hundred and twelve degrees in the South, forming a shape resembling a Vermilion Bird.

FIGURES

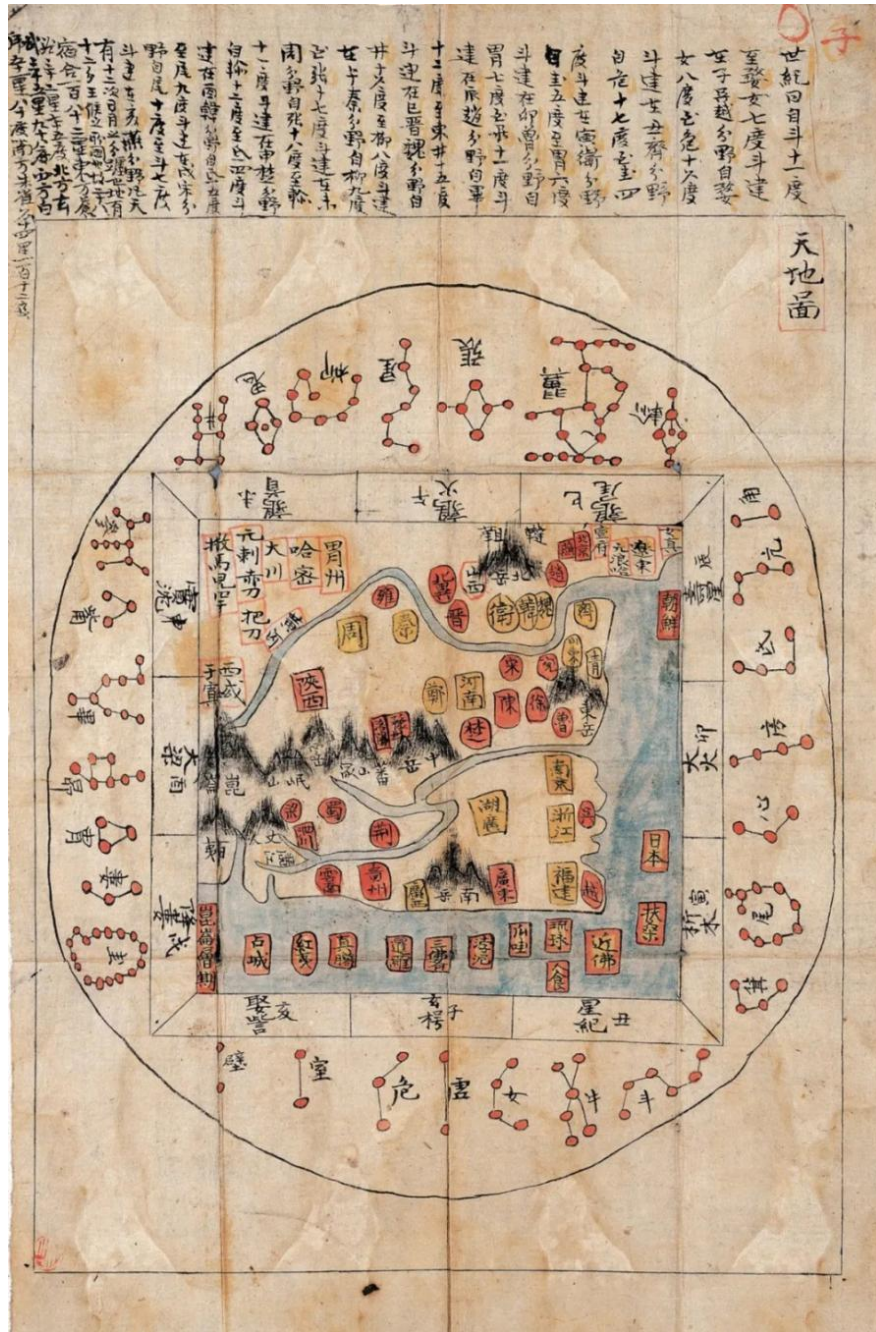


Figure 1. Anonymous author. *Map of Heaven and Earth* (K. Cheonjido; Ch. Tianditu 天地圖). Joseon period, nineteenth century. Color on paper. W 47.6 cm, H 30 cm. Seoul Museum of History.



Figure 2. Anonymous author. *Map of Heaven and Earth* (K. *Cheonjido*; Ch. *Tianditu* 天地圖). In the atlas *Terrestrial Maps* (K. *Yōjido*; Ch. *Yuditu* 輿地圖). Joseon period, nineteenth century. Hand color on paper. W 16 cm, H 16 cm. Library of Congress, G2330. Y667 18. Accessed December 10, 2024, <https://www.loc.gov/resource/g7900m.gct00119/?r=-0.274,0.56,0.548,0.362,0>.

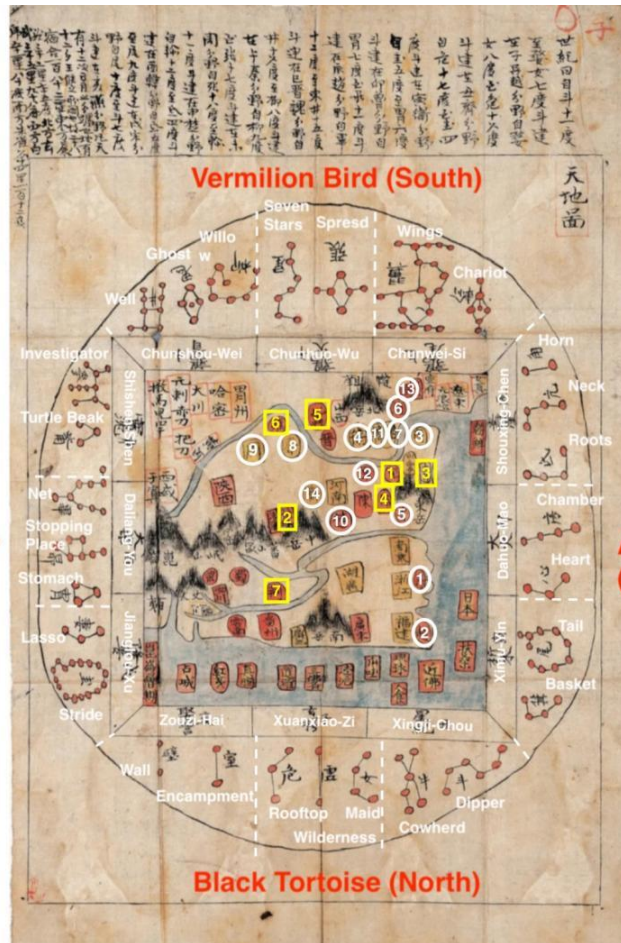


Figure 3. Anonymous author. *Map of Heaven and Earth* (Tiandi dingwei zhi tu 天地定位之圖). A page from *Amplified Almanac of Auspicious Images* (Xinjue lifa bianlan xiangji beiyao tonbgshu daquan 新鐫曆法便覽象吉備要通書大全). Edited by Wei Mingyuan 魏明遠. Published by Bu yue lou 步月樓藏版刻本. Woodblock-printed book. W 15.4 cm, H 24.6 cm. Qing Kangxi period, 1712, Vol. 1, 7. Library of Congress, 2014514163. Accessed July 7, 2024, <https://www.loc.gov/item/2014514163/>.

**Names of Provinces
(yellow squares):**

1. Yan 兗州
2. Yu 豫州
3. Qing 青州
4. Xu 徐州
5. Ji 冀州
6. Yong 雍州
7. Jing 荊州

**White Tiger
(West)**



**Names of Vassal States
(white circles):**

1. Wu 吳國
2. Yue 越國
3. Qi 齊國
4. Wei 衛國
5. Lu 魯國
6. Zhao 趙國
7. Wei 魏國
8. Qin 秦國
9. Zhou 周國
10. Chu 楚國
11. Han 韓國
12. Song 宋國
13. Yan 燕國
14. Zheng 鄭國

**Azure Dragon
(East)**

Figure 4. The two group of place names in the Joseon map. The first group, marked with white circles, are thirteen vassal states formed during the Spring and Autumn Period (770-476 BCE) and Warring States Period (476-221 BCE). The second group, marked with yellow squares, are provinces partitioned during Western Han Dynasty by Emperor Hanwu in 106 BCE. But the second group is incomplete. Only seven provinces are labeled in the map.

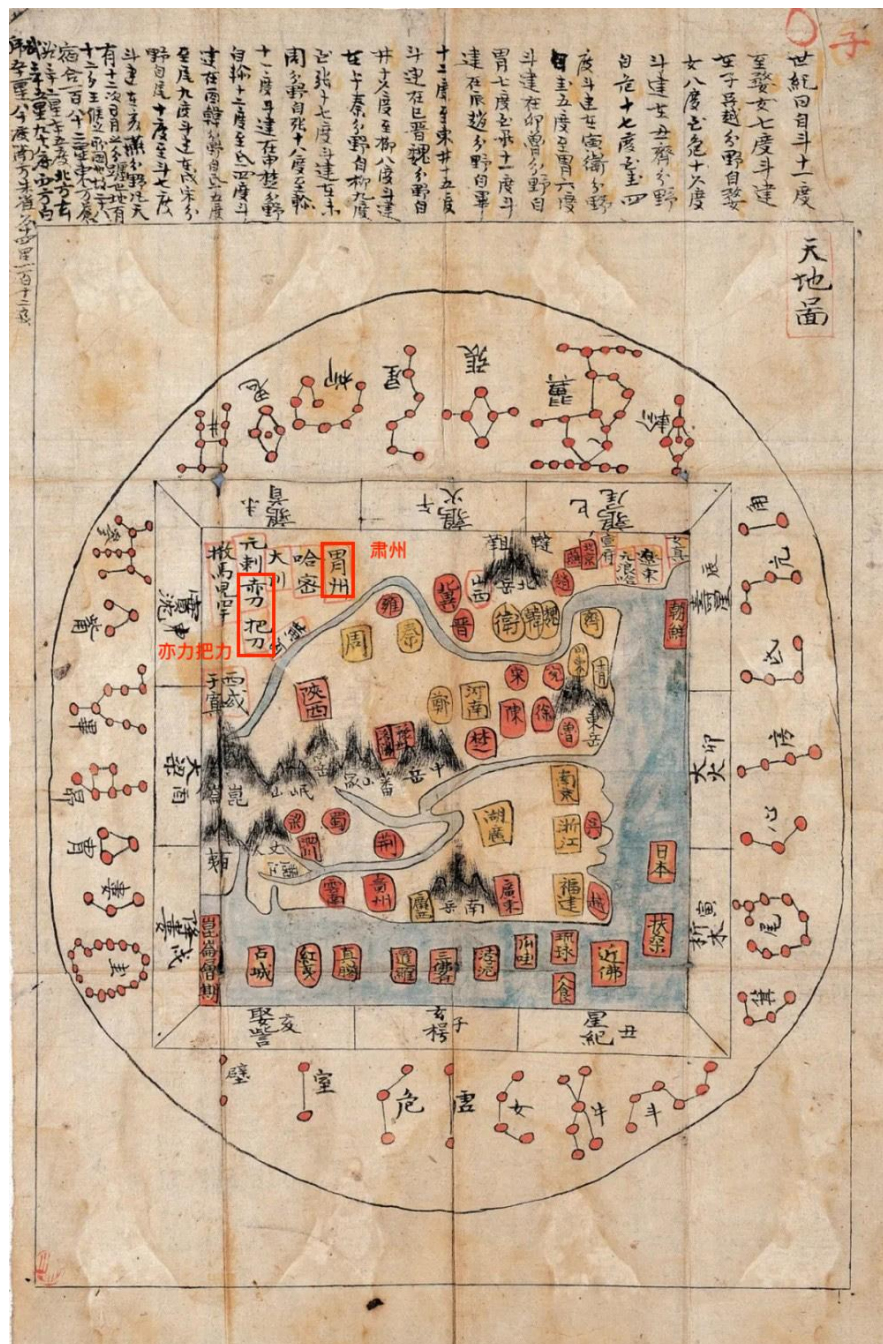


Figure 5. In the *Map of Heaven and Earth*, the place names *Chili bali* 赤力把力 and *Su zhou* 肅州 are mistakenly written as *Chidao badao* 赤刀把刀 and *Wei zhou* 胃州 (marked with red boxes).

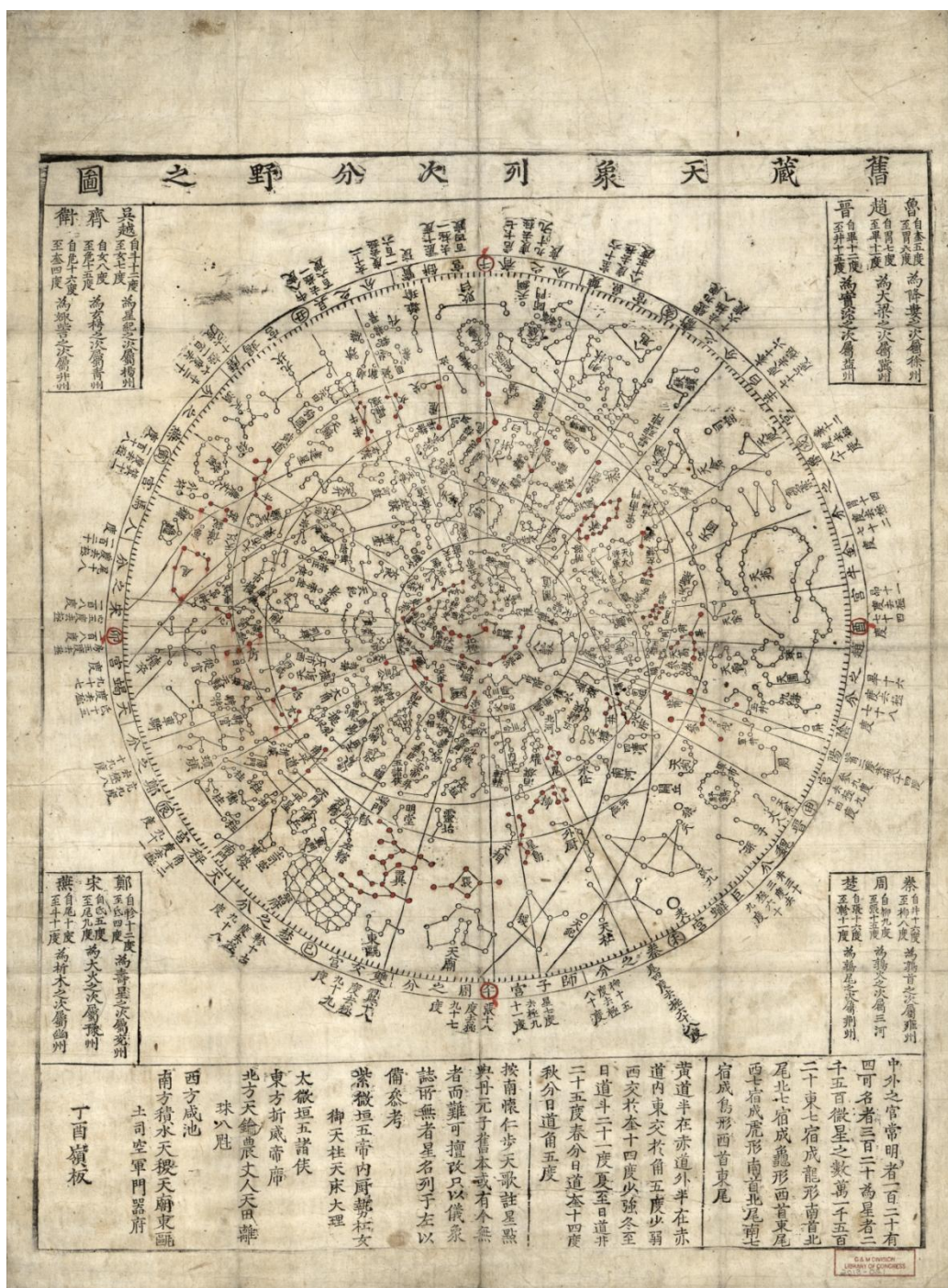


Figure 6. Anonymous author. *Old Sky Chart Showing Rank and Distribution of Stars* (Kujang Ch'önsang Yölch'a Punya Chido 舊藏天象列次分野之圖). 1777. Hand color on paper. W 47 cm, H 62 cm. Library of Congress Geography and Map Division Washington, D.C., G3190 1777 KB. Accessed May 15, 2024, <https://www.loc.gov/resource/g3190.ct003823/>.



Figure 7. In the *Map of Heaven and Earth*, the annotation “Danqiu burns once every thousand years, the Yellow River clears once every thousand years----a portent of the sage's birth.” (Danqiu qiannian yishao, huanghe qiannian yiqing, shengren chushi zhizhao 丹丘千年一燒, 黃河千年一清, 聖人出世之兆) is written at the bottom right edge (marked with a red circle).



Figure 8. Anonymous author. *Ox-belly Cave (Ubokto 牛腹洞)*. In the atlas *Terrestrial Maps (Yōjido 輿地圖)*. Joseon period (1393-1894), nineteenth century. Hand color on paper. W 16 cm, H 16 cm. Library of Congress, G2330. Y667 18. Accessed December 10, 2024, <https://www.loc.gov/resource/g7900m.gct00119/?sp=9>.



Figure. 9. In the *Map of Heaven and Earth*, only a few place names of provinces are labeled, including Jizhou, Youzhou, Qingzhou, Xuzhou, Yanzhou, Yangzhou (marked with red boxes).

TABLES

Table 1. Correspondence Between the Lunar Mansions and Jupiter Stations in the Joseon *Map of Heaven and Earth*

Lunar Mansion/ Star Lodge (xiu 宿)	Jupiter Station (ci 次)	Chen 辰
Dou 斗 (Dipper), Qianniu 牽牛 (Cowherd)	Xingji 星紀	Chou 丑
Xunü 須女 (Maid), Xu 虛 (Wilderness), Wei 危 (Rooftop)	Xuanxiao 玄枵	Zi 子
Shi 室 (Encampment), Bi 壁 (Wall)	Zouzi 娵訾	Hai 亥
Kui 奎 (Stride), Lou 婁 (Lasso)	Jianglou 降婁	Xu 戌
Wei 胃 (Stomach), Mao 昴 (Stopping Place), Bi 畢 (Net)	Daliang 大梁	You 酉
Zi 觜 (Turtle Beak), Shen 參 (Investigator)	Shichen 實沈	Shen 申
Jing 井 (Well), Gui 鬼 (Ghost), Liu 柳 (Willow)	Chunshou 鶉首	Wei 未
Xing 星 (Seven Stars), Zhang 張 (Spread)	Chunhuo 鶉火	Wu 午
Yi 翼 (Wings), Zhen 軫 (Chariot)	Chunwei 鶉尾	Si 巳
Jiao 角 (Horn), Kang 亢 (Neck), Di 氐 (Roots)	Shouxing 壽星	Chen 辰
Fang 房 (Chamber), Xin 心 (Heart)	Dahuo 大火	Mao 卯
Wei 尾 (Tail), Ji 箕 (Basket)	Ximu 析木	Yin 寅

Table 2. Chinese Twenty-Eight Star Lodges: English Translations and Corresponding Determinative Stars

Number	Name	Translation	Determinative Star
1	角 (Jiao)	Horn	α Virginis
2	亢 (Kang)	Neck	κ Virginis
3	氐 (Di)	Roots	α Librae
4	房 (Fang)	Chamber	π Scorpil
5	心 (Xin)	Heart	α Scorpil
6	尾 (Wei)	Tail	μ Scorpil
7	箕 (Ji)	Basket	γ Sagittarri
8	斗 (Dou)	Dipper	ϕ Sagittarri
9	牛 (Niu)	Cowherd	β Capricorni
10	女 (Nu)	Maid	ε Aquarii
11	虚 (Xu)	Wilderness	β Aquarii
12	危 (Wei)	Rooftop	α Aquarii
13	室 (Shi)	Encampment	α Pegasi
14	壁 (Bi)	Wall	γ Pegasi
15	奎 (Kui)	Stride	η Andromedae
16	婁 (Lou)	Lasso	β Arietis
17	胃 (Wei)	Stomach	35 Arietis
18	昂 (Mao)	Stopping Place	17 Tauri
19	畢 (Bi)	Net	ε Tauri
20	觜 (Zi)	Turtle Beak	λ Orionis
21	參 (Shen)	Investigator	ζ Orionis
22	井 (Jing)	Well	μ Geminorum
23	鬼 (Gui)	Ghost	θ Cancri
24	柳 (Liu)	Willow	δ Hydrae
25	星 (Xing)	Seven Stars	α Hydrae
26	張 (Zhang)	Spread	υ Hydrae
27	翼 (Yi)	Wings	α Crateris
28	軫 (Zhen)	Chariot	γ Corvi

Table 3. The Field-Allocation System According to the *Diwang shiji*

Lunar Mansion/ Star Lodge (xiu 宿)	Jupiter Station (ci 次)	Chen 辰	Opposition Jupiter	Musical Tone (lü 律)	Doujian 斗建	Related vassal states (fenye 分野)
Dipper (dou 斗) 11°-Maid (Wunü 婺女) 7°	Xingji 星紀	Chou 丑	Chifenruo 赤奮若	Huangzhong 黃鐘	Zi 子	Wu, Yue 吳, 越
Maid (Wunü 婺女) 8° -Rooftop (Wei 危) 16°	Xuanxia 玄枵	Zi 子	Kundun 困敦	Da lü 大呂	Chou 丑	Qi 齊
Rooftop (Wei 危) 17°- Stride (Kui 奎) 4°	Zouzi 娵訾	Hai 亥	Dayuanxian 大淵獻	Tai zu 太簇	Yin 寅	Wei 衛
Stride (Kui 奎) 5°-Stomach (Wei 胃) 6°	Jianglou 降婁	Xu 戌	Yanmou 閼茂	Jia zhong 夾鐘	Mao 卯	Lu 魯
Stomach (Wei 胃) 7°- Net (Bi 畢) 11°	Daliang 大梁	You 酉	Zuo'e 作噩	Gu xi 姑洗	Chen 辰	Zhao 趙
Net (Bi 畢) 12°-Well (Jing 井) 15°	Shichen 實沈	Shen 申	Tuntan 涿灘	Zhong lü 中呂	Si 巳	Jin 晉, Wei 魏
Well (Jing 井) 16°- Willow (Liu 柳) 8°	Chunshou 鶉首	Wei 未	Jiexia 叶洽	Rui bin 蕤賓	Wu 午	Qin 秦
Willow (Liu 柳) 9°- Spread (Zhang 張) 17°	Chunhuo 鶉火	Wu 午	Dunzang 敦牂	Lin zhong 林鐘	Wei 未	Zhou 周
Spread (Zhang 張) 18°- Chariot (Zhen 軫) 11°	Chunwei 鶉尾	Si 巳	Dahuangluo 大荒落	Yi ze 夷則	Shen 申	Chu 楚
Chariot (Zhen 軫) 12°- Roots (Di 氏) 4°	Shouxing 壽星	Chen 辰	Zhixu 執徐	Nan lü 南呂	You 酉	Han 韓
Roots (Di 氏) 5° -Tail	Dahuo 大火	Mao 卯	Dan'e 單閼	Wu she 無射	Xu 戌	Song 宋

(Wei 尾) 9°						
Tail (Wei 尾) 10°-Dipper (Dou 斗)	Ximu 析木	Yin 寅	Shetige 攝 提格	Ying zhong 應鐘	Hai 亥	Yan 燕

Table 4. Variations of the Field-Allocation System in Ancient Chinese Texts

Four quadrants of the equator symbolized by four animals		Azure Dragon of the East 東方青龍			Black Tortoise of the North 北方玄武				White Tiger of the West 西方白虎			Vermilion Bird of the South 南方朱雀		
	No.	1	2	3	4	5	6	7	8	9	10	11	12	13
Chinese ancient texts	Jupiter station	Shouxing 壽星	Dahuo 大火	Ximu 析木	Xingji 星紀		Xuanxiao 玄枵	Zouzi 娵訾	Jianglou 降婁	Daliang 大梁	Shichen 實沈	Chunhou 鶉首	Chunhuo 鶉火	Chunwei 鶉尾
Lüshichunqiu 吕氏春秋	Provinces	/	/	Youzhou 幽州	Yangzhou 扬州		Qingzhou 青州	Yanzhou 兗州	Xuzhou 徐州	/	Jizhou 冀州	Yongzhou 雍州	Yuzhou 豫州	Jingzhou 荊州
	Chinese ancient Vassal States	/	/	Yan State 燕國	Yue State 越國		Qi State 齊國	Wei State 衛國	Lu State 魯國	/	Jin State 晉國	Qin State 秦國	Zhou State 周國	Chu State 楚國
Huainanzi 淮南子	Chinese ancient vassal states	Zheng State 鄭國	Song State 宋國	Yan State 燕國	Yue State 越國	Wu State 吳國	Qi State 齊國	Wei State 衛國	Lu State 魯國	Wei State 魏國	Zhao State 趙國	Qin State 秦國	Zhou State 周國	Chu State 楚國

	Corresponding lunar mansions	Jiao 角 (Horn), Kang 亢 (Neck)	Di 氏 (Roots), Fang 房 (Chamber), Xin 心 (Heart)	Wei 尾 (Tail), Ji 箕 (Basket)	Dou 斗 (Dipper), Qian 牽牛 (Cowherd)	Xunü 須女 (Maid)	Xu 虛 (Wilderness), Wei 危 (Roof top)	Shi 室 (Encampment), Bi 壁 (Wall)	Kui 奎 (Stride), Lou 婁 (Lasso)	Wei 胃 (Stomach), Mao 昴 (Stopping Place), Bi 畢 (Net)	Zi 觜 (Turtle Beak), Shen 參 (Investigator)	Jing 井 (Well), Gui 鬼 (ghost)	Liu 柳 (Willow), Qixing 七星 (Seven Stars), Zhang 張 (Spread)	Yi 翼 (Wings), Zhen 軫 (Chariot)
Tianguan shu 天官書, Shi Ji 史記	Provinces	Yanzhou 兗州	Yuzhou 豫州	Youzhou 幽州	River and Lake 江、湖	Yangzhou 揚州	Qingzhou 青州	Bingzhou 並州	Xuzhou 徐州	Jizhou 冀州	Yizhou 益州	Yongzhou 雍州	Sanhe District 三河	Jingzhou 荊州
	Corresponding lunar mansions	Jiao 角 (Horn), Kang 亢 (Neck), Di 氏 (Roots)	Fang 房 (Chamber), Xin 心 (Heart)	Wei 尾 (Tail), Ji 箕 (Basket)	Dou 斗 (Dipper)	Qian 牽牛 (Cowherd), Wunü 婺女 (Maid)	Xu 虛 (Wilderness), Wei 危 (Roof top)	Shi 室 (Encampment), Bi 壁 (Wall)	Kui 奎 (Stride), Lou 婁 (Lasso), Wei 胃 (Stomach)	Mao 昴 (Stopping Place), Bi 畢 (Net)	Zi 觜 (Turtle Beak), Shen 參 (Investigator)	Jing 井 (Well), Gui 鬼 (ghost)	Liu 柳 (Willow), Qixing 七星 (Seven Stars), Zhang 張 (Spread)	Yi 翼 (Wings), Zhen 軫 (Chariot)

Jin Shu 晉書	Chinese ancient vassal states	Zheng State 鄭國	Song State 宋國	Yan State 燕國	Wu and Yue States 吳越國	Qi State 齊國	Wei State 衛國	Lu State 魯國	Zhao State 趙國	Wei State 魏國	Qin State 秦國	Zhou State 周國	Chu State 楚國
	Provinces	Yanzhou 兗州	Yuzhou 豫州	Youzhou 幽州	Yangzhou 揚州	Qingzhou 青州	Bingzhou 並州	Xuzhou 徐州	Jizhou 冀州	Yizhou 益州	Yongzhou 雍州	Sanhe 三河	Jingzhou 荊州
	Twelve chen 十二辰	Chen 辰	Mao 卯	Yin 寅	Chou 丑	Zi 子	Hai 亥	Xu 戌	You 酉	Shen 申	Wei 未	Wu 午	Si 巳
	Corresponding lunar mansions	Jiao 角 (Horn), Kang 亢 (Neck), Di 氐 (Roots)	Fang 房 (Chamber), Xin 心 (Heart)	Wei 尾 (Tail), Ji 箕 (Basket)	Dou 斗 (Dipper), Qianniu 牽牛 (Cowherd), Xunü 須女 (Maid)	Xu 虛 (Wilderness), Wei 危 (Roof top)	Shi 室 (Encampment), Bi 壁 (Wall)	Kui 奎 (Stride), Lou 婁 (Lasso), Wei 胃 (Stomach)	Mao 昴 (Stopping Place), Bi 畢 (Net)	Zi 觜 (Turtle Beak), Shen 參 (Investigator)	Jing 井 (Well), Gui 鬼 (Ghost)	Liu 柳 (Willow), Qixing 七星 (Seven Stars), Zhang 張 (Spread)	Yi 翼 (Wings), Zhen 軫 (Chariot)

	Span of corresponding lunar mansions	twelve degrees of Zhen 軫 (Chariot) to four degrees of Di 氐 (Base)	five degrees of Di 氐 (Base) to nine degrees of Wei 尾 (Tail)	ten degrees of Wei 尾 (Tail) to eleven degrees of Dou 斗 (Dipper)	twelve degrees of Dou 斗 (Dipper) to seven degrees of Nü 女 (Girl)	eight degrees of Nü 女 (Girl) to fifteen degrees of Wei 危 (Roof top)	sixteen degrees of Wei 危 (Roof top) to four degrees of Kui 奎 (Strider)	five degrees of Kui 奎 (Strider) to six degrees of Wei 胃 (Stomach)	seven degrees of Wei 胃 (Stomach) to eleven degrees of Bi 畢 (Net)	twelve degrees of Bi 畢 (Net) to fifteen degrees of Jing 井 (Well)	sixteen degrees of Jing 井 (Well) to eight degrees of Liu 柳 (Willow)	nine degrees of Liu 柳 (Willow) to sixteen degrees of Zhang 張 (Spread)	seventeen degrees of Zhang 張 (Spread) to eleven degrees of Zhen 軫 (Chariot)
Kaiyuan zhanjing 開元占經	Chinese ancient vassal states	Zheng State 鄭國	Song State 宋國	Yan State 燕國	Wu and Yue States 吳越國	Qi State 齊國	Wei State 衛國	Lu State 魯國	Zhao State 趙國	Wei State 魏國	Qin State 秦國	Zhou State 周國	Chu State 楚國
	Twelve chen 十二辰	Chen 辰	Mao 卯	Yin 寅	Chou 丑	Zi 子	Hai 亥	Xu 戌	You 酉	Shen 申	Wei 未	Wu 午	Si 巳
	Corresponding lunar mansions	Jiao 角 (Horn), Kang 亢 (Neck)	Di 氐 (Roots), Fang 房 (Chamber), Xin 心	Wei 尾 (Tail), Ji 箕 (Basket)	Dou 斗 (Dipper), Qianniu 牽牛 (Cowherd)	Xunü 須女 (Maid), Xu 虛 (Wilderness)	Wei 危 (Roof top), Shi 室 (Encampment),	Kui 奎 (Strider), Lou 婁 (Lasso)	Wei 胃 (Stomach), Mao 昴 (Stopping Place)	Bi 畢 (Net), Zi 觜 (Turtle Beak), Shen 參 (Investigator)	Jing 井 (Well), Gui 鬼 (Ghost)	Liu 柳 (Willow), Qixing 七星 (Seven Stars), Zhang 張	Yi 翼 (Wings), Zhen 軫 (Chariot)

			(Heart)				Bi 壁 (Wall)					(Sprea d)	
Span of corresp onding lunar mansio ns	twelve degree s of Zhen 軫 (Chari ot) to the four degree s of Di 氏 (Base)	five degree s of Di 氏 (Base) to nine degree s of Wei 尾 (Tail)	ten degre es of Wei 尾 (Tail) to eleve n degre es of Dou (Dipp er)	twelve degrees of Dou 斗 (Dipper) to seven degrees of Nü 女 (Girl)	eight degree s of Nü 女 (Girl) to fifteen degree s of Wei 危 (Roof top)	sixtee n degre es of Wei 危 (Roof top) to four degre es of Kui 奎 (Strid e)	five degre es of Kui 奎 (Strid e) to six degre es of Wei 胃 (Stom ach)	seven degre es of Wei 胃 (Stom ach) to eleve n degre es of Bi 畢 (Net)	twelve degrees of Bi 畢 (Net) to fifteen degrees of Jing 井 (Well)	sixteen degree s of Jing 井 (Well) to eight degree s of Liu 柳 (Willow)	nine degree s of Liu 柳 (Willow) to sevent een degree s of Zhang 張 (Sprea d)	eighteen degrees of Zhang 張 (Spread) eleven degrees of Zhen 軫 (Chariot)	

Diwang shiji 帝王世紀 (adopted by Joseon Map)	Chinese ancient vassal states	Han State 韓國	Song State 宋國	Yan State 燕國	Wu and Yue States 吳越國	Qi State 齊國	Wei State 衛國	Lu State 魯國	Zhao State 趙國	Jin and Wei States 晉魏	Qin State 秦國	Zhou State 周國	Chu State 楚國
	Twelve chen 十二辰	Chen 辰	Mao 卯	Yin 寅	Chou 丑	Zi 子	Hai 亥	Xu 戌	You 酉	Shen 申	Wei 未	Wu 午	Si 巳
	Corresponding lunar mansions	Jiao 角 (Horn), Kang 亢 (Neck), Di 氏 (Roots)	Fang 房 (Chamber), Xin 心 (Heart)	Wei 尾 (Tail), Ji 箕 (Basket)	Dou 斗 (Dipper), Qianniu 牽牛 (Cowherd)	Xunü 須女 (Maid), Xu 虛 (Wilderness), Wei 危 (Rooftop)	Shi 室 (Encampment), Bi 壁 (Wall)	Kui 奎 (Stride), Lou 婁 (Lasso)	Wei 胃 (Stomach), Mao 昴 (Stopping Place), Bi 畢 (Net)	Zi 觜 (Turtle Beak), Shen 參 (Investigator)	Jing 井 (Well), Gui 鬼 (Ghost), Liu 柳 (Willow)	Xing 星 (Seven Stars), Zhang 張 (Spread)	Yi 翼 (Wings), Zhen 軫 (Chariot)
	Span of corresponding lunar mansions	twelve degrees of Zhen 軫 (Chariot) to four degrees of Di 氏 (Base)	five degrees of Di 氏 (Base) to nine degrees of Wei 尾 (Tail)	ten degrees of Wei 尾 (Tail) to seven degrees of Dou 斗 (Dipper)	eleven degrees of Dou 斗 (Dipper) to seven degrees of Wunü 婺女 (Girl)	eight degrees of Zhen 軫 (Girl) to sixteen degrees of Wei 危 (Rooftop)	seven degrees of Wei 危 (Rooftop) to four degrees of Kui 奎 (Stride)	five degrees of Kui 奎 (Stride) to six degrees of Wei 胃 (Stomach)	seven degrees of Wei 胃 (Stomach) to eleven degrees of Bi 畢 (Net)	twelve degrees of Bi 畢 (Net) to fifteen degrees of East Well 東井	sixteen degrees of Well 井 to eight degrees of Liu 柳 (Willow)	Nine degrees of Liu 柳 (Willow) to seventeen degrees of Zhang 張 (Spread)	eighteen degrees of Zhang 張 (Spread) to eleven degrees of Zhen 軫 (Chariot)

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BIBLIOGRAPHY

- Chennault, Cynthia L., and Keith N. Knapp, Alan J. Berkowitz, Albert E. Dien. *Early Medieval Chinese Texts: A Bibliographical Guide*. Berkeley: Institute of East Asian Studies, 1995.
- Dorofeeva-Lichtmann, Vera. “‘Inversed Cosmographs’ in Late East Asian Cartography and the Atlas Production Trend.” In *East-West Encounter in the Science of Heaven and Earth (Ten to chi no kagaku—Higashi to nishi no deai 天と地の科学——東と西の出会い)*. Edited by Tokimasa Takeda 武田時昌 and Bill M. Mak 麥文彪, 144-174. Kyoto: Institute for Research in Humanities of Kyoto University, 2019.
- Feng, Shi 馮時. *Zhongguo tianwen kaoguxue 中國天文考古學*. Beijing: Zhongguo shehui kexueyuan chubanshe, 2010.
- Ge, Zhaoguang 葛兆光. “Zuowei sixiangshi de guyutu 作为思想史的古輿图”. In *Zhaizi zhongguo: chongjian youguan zhongguo de lishi lunshu 宅兹中國：重建有關‘中國’的歷史論述*, 91-147. Beijing: Zhonghua shuju, 2011.
- Henderson, John B. “Chinese Cosmographical Thought: The High Intellectual Tradition”. In *Cartography in the Traditional East and Southeast Asian Societies Volume II*. Edited by J. B. Harley and David Woodward, 203-227. Chicago: The University of Chicago Press, 1994.
- Henderson, Gregory. “Chong Ta-san: A Study in Korea’s Intellectual History.” *The Journal of Asian Studies* 16, no. 3 (1957): 380-382.
- Huang, Shijian 黃時鑒, and Gong Yingyan 龔纓晏. *Limadou shijie ditu yanjiu 利瑪竇世界地圖研究*. Shanghai: Shanghai guji chubanshe, 2004.
- He, Ning 何寧. *Huainanzi jishi 淮南子集釋*. Beijing: Zhonghua shuju, 1998.
- Huang, Fumi 皇甫謐. *Diwang shiji jicun 帝王世紀輯存*. Edited by Xu Zongyuan 徐宗元. Beijing: Zhonghua shuju, 1964.
- Ho, Peng Yoke. *Chinese Mathematical Astrology: Reaching Out to the Stars*. London: RoutledgeCurzon, 2003.
- Hwang, Kyung Moon. *A History of Korea: An Episodic Narrative*. Basingstoke: Palgrave Macmillan, 2010.
- Jorgensen, John. *The Foresight of Dark Knowing: Chŏng Kam Nok and Insurrectionary Prognostication in Pre-Modern Korea*. Honolulu: University of Hawai’i Press, 2018.

- Kim, Seonhee. “Seongho Yi Ik’s New Approach to Zhijue 知覺 and Weifa 未發: Stimulation by Western Learning and the Expansion of Confucianism.” *Religions* 14 (2023): 1-18.
- Kim, Kyung Sung 金庚星. “韓國古地圖에 관한 研究 [The Study of the Old Korean Maps],” *지리/학논총*, vol. 4, (1977): 17-23.
- Li, Jun 李軍. “Kuawenhua yujing xia chaoxian tianxiatu zhi zhenxing: jianlun gudai ditu yanjiu de fangfalun wenti 跨文化語境下朝鮮《天下圖》之‘真形’——兼論古代地圖研究的方法論問題 [A Study of the “True Form” of JoseonCh’onha do from Transcultural Perspective and Its Related Methodological Issues on Ancient Map Research].” *Meishu daguan* 美術大觀, no. 12 (2020): 20-37.
- Ledyard, Gari. Cartography in Korea. In *Cartography in the Traditional East and Southeast Asian Societies Volume II*. Edited by J. B. Harley and David Woodward, 235-344. Chicago: The University of Chicago Press, 1994.
- Lin, Meicun 林梅村. “A Study on the Court Cartographers of the Ming Empire.” *Journal of Asian History* 49, (2015): 187-228.
- Liu, Zongdi 劉宗迪. “Shanhaijing yu gudai chaoxian de shijieguan 《山海經》与古代朝鮮的世界觀[Shan Hai Jing and the World Outlook of Ancient Korea].” *Zhongyuan wenhua yanjiu* 中原文化研究, no. 6 (2016): 14-23.
- Lim, Jongtae 임종태. “Representing an Ideal World Order of the Past: The Cultural Function of the Jesuit World Maps in Eighteenth-Century Korean Government.” In *Reimagining the Globe and Cultural Exchange: The East Asian Legacies of Matteo Ricci’s World Map*. Edited by Laura Hostetler, 235-265. Leiden: Koninklijke Brill NV, 2024.
- . “Matteo Ricci’s World Maps in Late Joseon dynasty.” *The Korean Journal for the History of Science* 33-2, (2011): 277-296.
- . “The Introduction of Western Science and the Rationalization of Traditional Astrology: Reevaluating Yi Ik’s ‘On Field-allocation’.” *Seoul Journal of Korean Studies* 17, (2004): 45-65.
- . “서구 지리학에 대한 동아시아 세계지리 전통의 반응: 17-18 세기 중국과 조선의 경우 [Impact of Western Geography on East Asian Geographical Tradition in the Seventeenth and Eighteenth Centuries China and Korea].” *한국과학사학회지/[Seoul Journal of Korean Studies]*, vol. 26, (2004): 315-344.
- Lew, Young Ick. *Brief History of Korea: A Bird’s-Eye View*. New York: The Korea Society, 2000.

- Lewis, James B. "The Wanli Emperor and Ming China's Defence of Korea Against Japan." *International Journal of Asian Studies* 8, no. 1 (2011): 73-80.
- Magalhaes, Gabriel. *A New History of China: Containing a Description of the Most Considerable Particulars of that Vast Empire*. London: Thomas Newborough, 1688.
- Nakamura, Hiroshi. "Old Chinese World Maps Preserved by the Joseons." *Imago Mundi* 4, (1947): 3-22.
- Nagel-Angermann, Monique. "Das Diwang shiji des Huangfu Mi (215-282)." PhD diss, Westfälischen Wilhelms-Universität, 1999.
- Oh, Sang-Hak. "Circular World Maps of the Joseon dynasty: Their Characteristics and Worldview." *Korea Journal* 48, no.1 (2008): 8-45.
- . "傳統時代 天地에 대한 相關의 思考와 그의 表現— 分野說을 중심으로 [A Correlative Thought on Heaven and Earth and Its Representataion in the Pre-Modern Society: The Theory of Punya]." *문화역사지리 제* [Cultural Historical Geography] 11 (1999): 15-29.
- Pankenier, David W. *Astrology and Cosmology in Early China: Conforming Earth to Heaven*. Cambridge: Cambridge University Press, 2013.
- Park, J. P. *A New Middle Kingdom: Painting and Cultural Politics in Late Joseon Korea (1700-1850)*. Seattle: University of Washington Press, 2018.
- Robinson, Kenneth R. "Joseon Korea in the Ryukoku Kangnido: Dating the Oldest Extant Joseon Map of the World (15th Century)." *Imago Mundi* 59, (2007): 177-191.
- Rufus, W. Carl. "Astronomy in Korea." *Transactions of the Korea Branch of the Royal Asiatic Society* XXVI, (1936): 1-48.
- Jeon, Sang-Woon 전상운. "李朝初期의 地理學과 地圖." *Ko munhwa* 古文化 4, (1966): 1-16.
- Shen, Yuhui 沈玉慧. "Chaoxian wangchao haiwai zhishi de xingcheng yu jilei: yi yuditu chaoxian riben liuqiuguo tu weili 朝鮮王朝海外知識的形成與積累——以《與地圖·朝鮮日本琉球國圖》為例 [The Formation and Accumulation of Joseon's Overseas Knowledge: Focusing on the Map of Joseon, Japan and Ryukyu in Yuditu]." *Gugong xueshu jikan* 故宮學術季刊 34, no. 2 (2016): 107-163.
- Smith, Richard J. "Mapping China's World: Cultural Cartography in Late Imperial China." In

- Mapping China and Managing the World: Culture, Cartography and Cosmology in Late Imperial Times*. Edited by Richard J. Smith, 48-88. London & New York: Routledge, 2013.
- “Chinese Maps as Cosmographs.” In *Chinese Maps: Images of ‘All Under Heaven.’* Edited by Richard J. Smith. London: Oxford University Press, 1996.
- Short, John Rennie. *Korea: A Cartographic History*. Chicago: The University of Chicago Press, 2012.
- Seo, Yoonjung. “Mapping the Earth and Ordering the Heavens: The Circulation and Transformation of Jesuit World Maps and Star Charts on a Screen in the Late Chosŏn Dynasty.” In *Cultural Exchanges Between Korea and the West: Artifacts and Intangible Heritage*. Edited by Jong-Chol An and Ariane Perrin, 199-227. Edizioni Ca’ Foscari: Venice University Press, 2023.
- Soh, Jeanhyyoung. “Utopia and Dystopia: Cheonha do and the Reception of Renaissance Geography in *East Asia: Toward a Global History of the ‘Ricci Maps.’*” Edited by Mario Cams and Elke Papelitzky, 206-228. Honolulu: University of Hawai’i Press, 2024.
- Xu, Zongyuan 徐宗元. *Diwang shiji jicun* 帝王世紀輯存. Beijing: Zhonghua shuju, 1964.
- Xu, Ning 徐寧. “Guotu suocang lichao chaoxian houqi de yuanxing ditu yanjiu 國圖所藏李朝朝鮮後期的圓形地圖研究 [The Study of Circular Map in the late Chosen Dynasty in National Library].” *Zhongguo lishi dili luncong* 中國歷史地理論叢 [Collections of Essays on Chinese Historical Geography] 17, no. 4 (2002): 146-151.
- Yee, Cordell D. K. “Traditional Chinese Cartography and the Myth of Westernization.” In *Cartography in the Traditional East and Southeast Asian Societies Volume II*. Edited by J. B. Harley and David Woodward, 170-202. Chicago: The University of Chicago Press, 1994.
- Yang, Yulei 楊雨蕾. “Limadou shijie ditu chuanru hanguo jiqi yingxiang 利瑪竇世界地圖传入韓國及其影响 [Matteo Ricci’s World Map and Its Influence on Korea].” *Zhongguo lishi dili luncong* 中國歷史地理論叢 [Journal of Chinese Historical Geography] 20, no. 1 (2005): 91-98.
- “Tiandi quantu he shiba shiji dongya shehui de shijie dili zhishi: zhongguo he chaoxian de jingyu 《天地全圖》和 18 世紀东亚社會的世界地理知識：中國和朝鮮的境遇.” *Shehui kexue zhanxian* 社會科學戰線 10, (2013): 89-101.